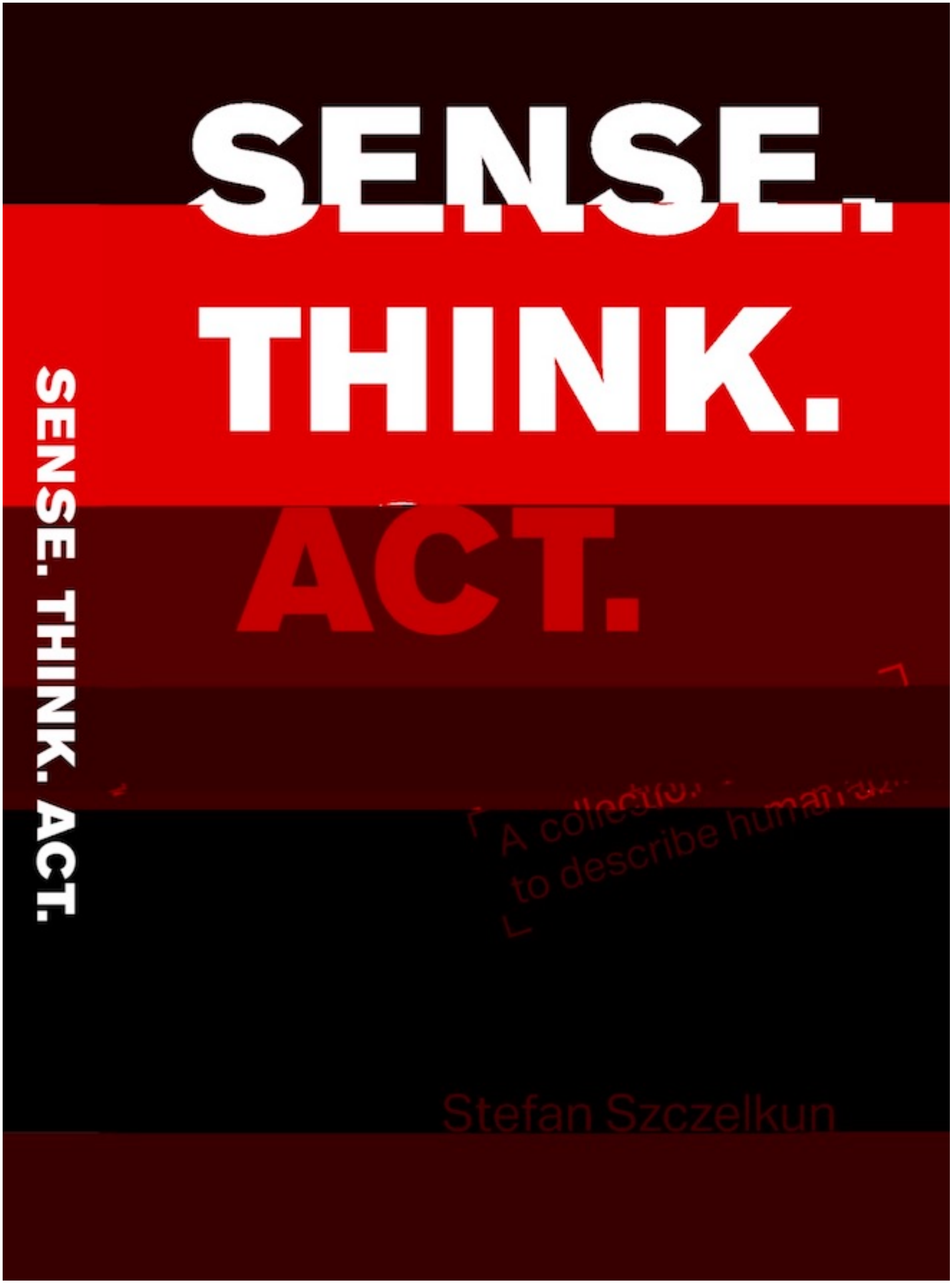


Book cover design by Mason Terrill Studios

Sense Think Act - Introduction

History has given us arbitrary cultures, religious practices and educational curricula. Most contain much of value but also much that seems to be redundant. In this book I suggest that such practices should relate to our elemental human faculties.

Who are we as humans? Thinking elementally we are made from these basic faculties and the subsequent articulation of higher level skills. By experiencing our basic abilities in a systematic way we may be able to get a new idea of what we are capable of.

To take full control of our abilities it is helpful to be able to get to know them in an embodied and organised way. This text provides a clearly structured presentation of our basic elemental abilities and ways to experience them. These elements of our power underly more complex abilities and tasks - like rearing children or making art. We are motivated to play with our sensory input by the pleasure that every sense flux gives us.

> “All pleasure is creative if it avoids exchange. Loving what pleases me, I have to build a space in life as little exposed as possible to pollution by business, or I will not find the strength to bring the old world down, and the fungus among us will rot my dreams.” Raoul Vaneigem, ‘Book of Pleasures’ 1984

A conscious approach to human ability could signal the end of our development as a victim of the largely irrational, mechanistic and barbarous process of history and the emergence of a mature period of conscious evolution in which we decide what we want to become rather than passively accepting our fate.

Mythology has provided us with many stories of witches and wizards who could change their shape at will, often taking on the shape of animals with supra-human qualities. This vision of metamorphosis was an imaginative insight into our true being. Existing religions and systems of self-improvement address and improve some abilities to a degree. However all deny the power of each person to take charge of their own development both alone and with their peers. The function of practices is often not made clear. We are not invited to make an assessment of the usefulness of any ritual or practice and discard it if it seems to serve no purpose. Religion is all to often a mish-mash of hocus-pocus which we are asked to take on as an act of faith. Modern culture insists each sense has its own form of expression and critical apparatus that is operated by experts. We are expected to be relatively passive consumers.

I am suggesting a system which is divided into basic component abilities only as a temporary expedient to get the idea across. Any exercise that was not working for a group or individual could always be replaced or improved on. The whole system and its categories is open to criticism and change. It could grow in response to what is learnt in practice and as conditions change.

Although such exercises may be amalgamated and built into cultural rituals or educational practices they should always refer back to the experience of our concrete human faculties. They need not become vacuous rituals whose origin and purpose is lost in the mists of time. As they become redundant they can be replaced. Culture, education and religion could continually be under review and will be reinvented in response to changing needs.

Literary book based knowledge repressed the common oral-visual knowledges in the early Enlightenment period in Europe. This led to a demotion of oral skills and knowledge from the realm of 'serious' learning which had to be written and published by a dominant literary class.

> "The mind-shaping powers of the ocular, tactile, kinaesthetic, and auditory skills remain scarcely articulated in the tale of Western civilisations turn to the cultivation of the interior.” Barbara M. Stafford, 'Artful Science: enlightenment entertainment and the eclipse of visual education' MIT 1994 pXXII

Imagine an education system based on basic principles of sensory pleasure. My guess is that it would result in a much less culturally predetermined person. The goal of education would be quality of life rather fitting people into the system of work. Culture would become more clearly a matter of heritage, choice and play rather than an obligation or straightjacket.

> "The important thing is that the question of the relationship between aesthetics and politics be raised at this level, the level of the sensible delimitation of what is common to the community, the forms of its visibility and its organisation" Jacques Rancière, The Politics of Aesthetics 2004 p.18

A world culture made from such a conscious view of ourselves would be one in which people would be aware of local needs and widespread access to channels of expression in all the sense media. It would tend towards a globally and rationally defined human being rather than culture being a set product of particular traditions. Although traditional cultures could be a rich source of inspiration and choice the drive would be to make going into the future a conscious process. We would take charge of who we are to become.

The idea of remaking cultural totality from scratch came from the many experiences I had in the late Sixties with people who were approaching the creative process in this way. Apart from the Scratch Orchestra which I was a part of, there were people like John Steven's Spontaneous Music Ensemble and David Medalla and The Exploding Galaxy.

The idea of collecting exercises to explore our basic abilities arose from previous research into basic human life supports published as the Survival Scrapbooks: Shelter, Food and Energy. Whilst researching the book on energy I came across a detailed description of an ideal way of standing in Iyengar's book Light on Yoga. I then thought of Francis Bacon's Idols of the Mind as similarly basic thinking about another area of human ability. I wondered if a collection could be made which covered all the elemental human abilities. After a couple of years a structure emerged that seemed a good compromise between simplicity and catholicity. This was the dynamic triad;

SENSE

THINK

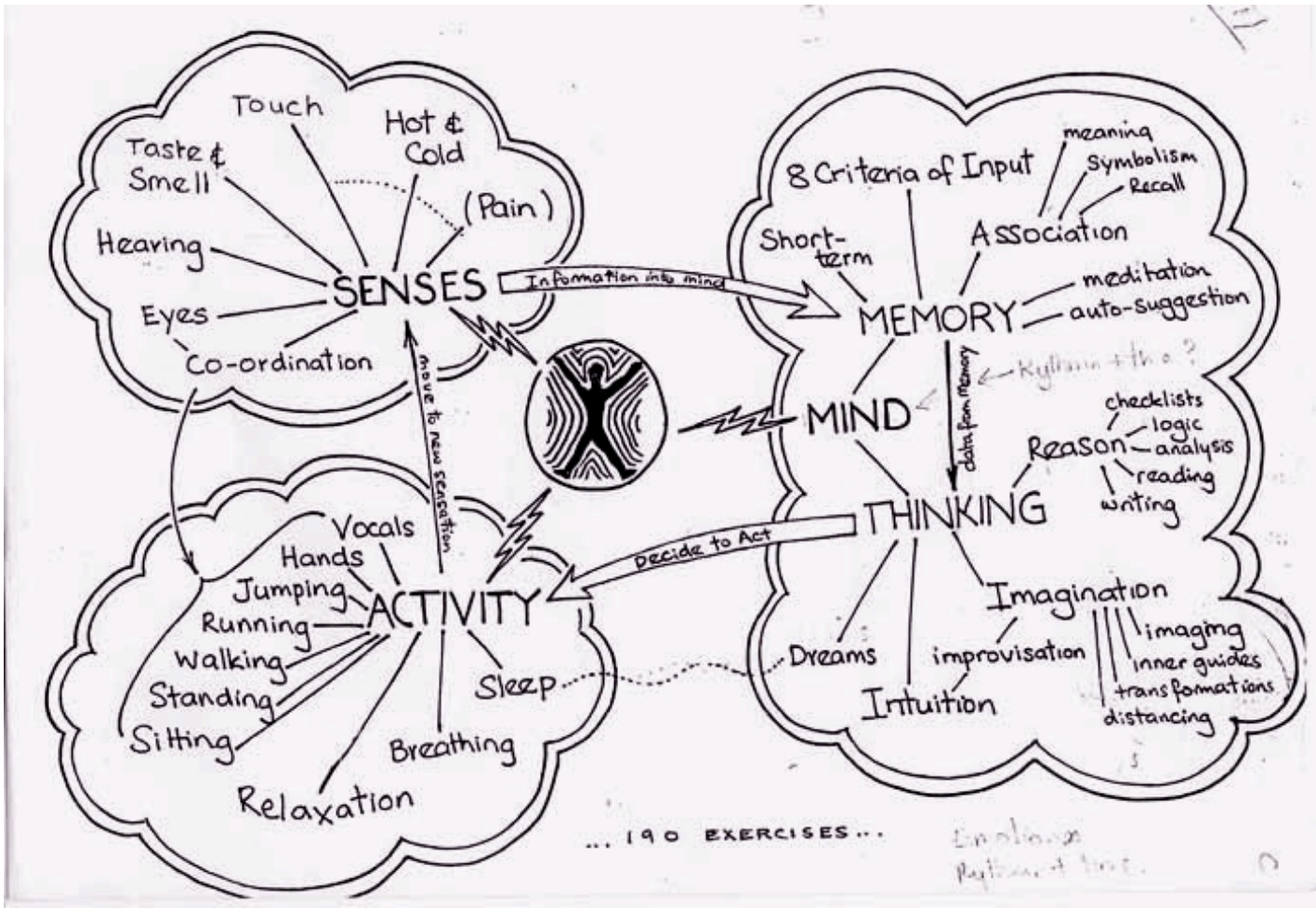
ACT

The senses pick up information in various media from outside and inside the body. They monitor what is happening. This sensory information then travels along nerve pathways to the brain where it is compared with past experience, analysed and evaluated. The result of this processing is a decision to do or not do. Doing something inevitably requires movement and muscle action; whether it be writing a poem, taking evasive action in the face of attack or chewing the top of your pencil.

This sequence provides a model for the organisation of the information in this book. In reality it should be borne in mind that senses, mind and muscle are a interdependent and closely integrated unity. In particular we can only experience the senses through their mental effects; our perception. However it is arguably useful to distinguish between direct sense perception and mental processes that have a secondary relation to the senses.

The knowledge we gain through experience is in some ways the most potent type of knowledge. It is the experience of doing that impresses us most deeply. You can read a book about driving, but until you get behind the wheel and switch on the ignition you don't really begin to know about driving. This information is about the faculties through which all our knowledge flows: The key knowledge that precedes all other knowing; To look to learn how to see; To think about how to think better; To flick through index cards to find an exercise on dexterity. I wanted at the end of the day, to catalyse insight into our fundamental functioning rather than prescribe what other people should be doing.

Stefan Szczelkun 2015



S-T-A is a simplistic model and in reality the three categories operate simultaneously and in close correspondence. Certain areas of our basic abilities do not fit into the tripartite model.

Time & Rhythm Our perception of time and rhythm seem to be a synthetic function of all three STA areas. Our 'sense' of time passing is a function of sense data looping through some mental awareness of time passing. It works with information from all the other senses to establish relative speeds of pulse. A pulse is a regular variation in the intensity of sensory input. A fundamental example of which is our awareness of our own heartbeat. Add to this a conceptual ability to be aware of things happening sequentially, one after the other, with a certain degree of regularity or a rhythm.

Pulse patterns, or pulses with accents, may reappear and be recognisable often with other sensory associations that give them meaning. The patterns can also relate to mathematical regularities of proportion which we appreciate through our senses. Clearly rhythm can be perceived in every sense although it is largely associated with the sense of hearing.

A sense of time that can recognise a precise regular beat may be a learnt faculty. The omnipresence of clocks and other precise beat keepers in modern life makes it difficult to say what the perception of regular time intervals would be capable of without this reference point. Although the heart muscle is fundamental to the idea of beat it is of course not regular. Other muscle groups can be important like hand claps or thigh slaps and foot stomps.

Blues rhythm often referred to walking as the reference point. Shoes and pavements certainly gave the modern world a newly clipped sense of rhythm.

Basically rhythm is somewhere between sense, mind and muscle. It is a function of the wholeness of our being and a reminder that the structure of STA is a temporary expedient.

Emotion STA posits that there is a flow of data in through our senses via mind to muscle action. The data flow may also result in the production or circulation of hormones and other biochemicals such as endorphins or adrenaline. These may lead to feeling states and emotions as well as other body changes.

Emotions are included under the heading Thinking but may be quite physical and even muscular in its expression.

Pain The alarm system of the body which defends the integrity of the organism and ensures its continued survival is felt as pain. We feel pain from free nerve endings rather than sense receptors.

Organisms have a common reaction to the noxious or harmful in their tendency to constrict or contract away from such stimulus. The reaction to a pleasant and need fulfilling stimulus is to open up, expand, relax and generally dilate.

In this way pleasure and pain mediate survival on the most basic level. The major activity of the brain is concerned with awareness of pleasure and pain upon which the survival of individuals and species may depend. The perception and handling of pain is not yet fully understood, nor have specific pain receptors been identified. There are two qualities of pain that are carried along fibres of different diameter. Larger fibres carry the knowledge of pain, whilst smaller fibres transmit a suffering quality. Painful experience seems to be the interaction between these fibres in the central nervous system.

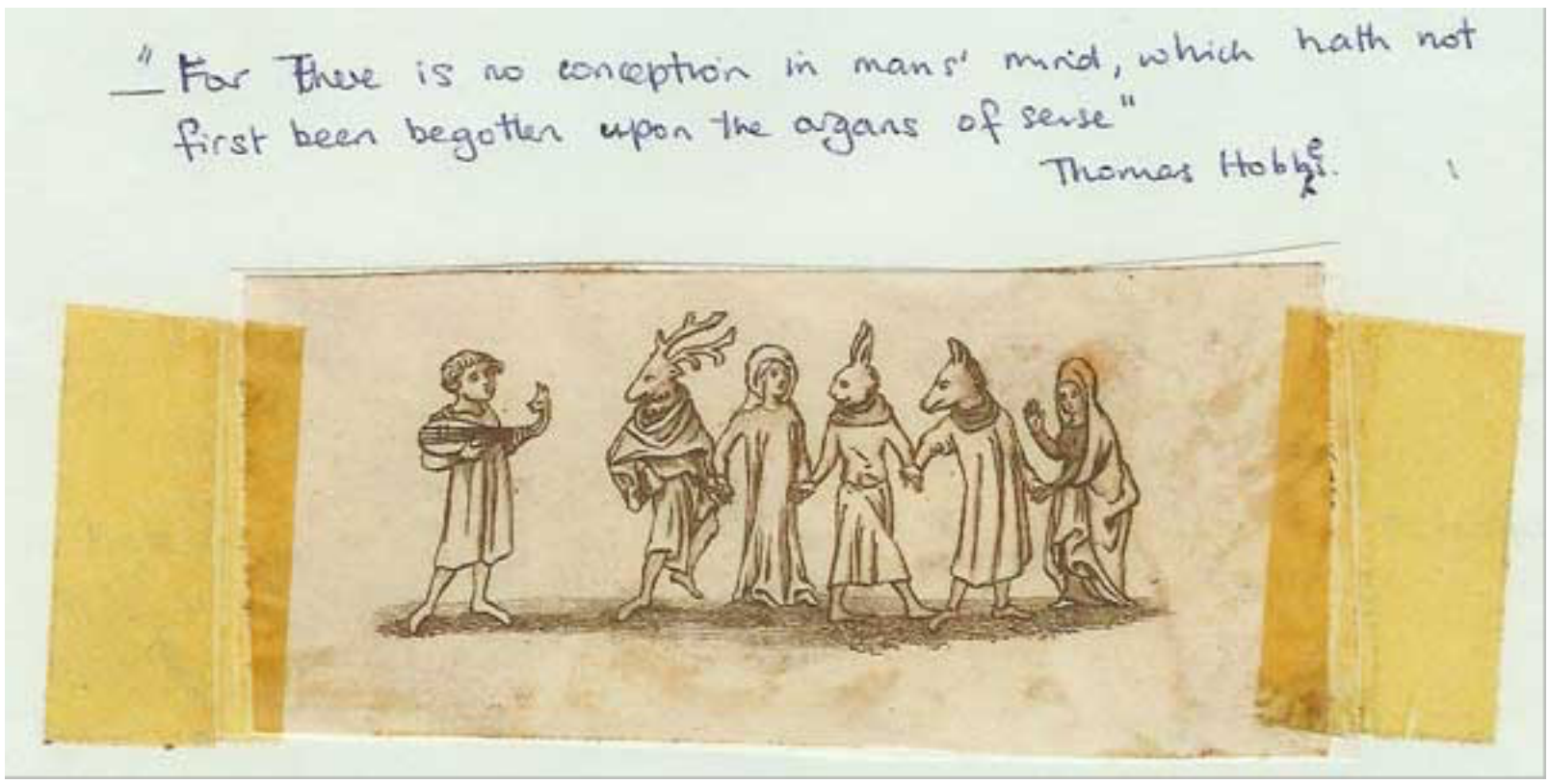
Is Pain a sense? Or is it an antithesis of the pleasure producing senses?

The destruction or mechanical dislocation of body tissue that is sufficient to constitute a damage to our organism may stimulate pain. Other knowledge of threats to our survival or integrity will trigger a psychic anxiety commonly expressed in the emotions of fear and grief but also felt as a mental suffering. Such threats may also result in the release of hormonal chemicals by the body. But pain if often felt when there is no actual threat to our integrity - there are various ideas as to why this is. I think that such pains are intense recordings of past pain. The pain recordings may be thought of as somehow locked into the body-mind from which they can at times erupt uninvited.

Draft definition: Pain is the alarm system of the body which defends the integrity of the organism and its continued survival. But pain can also become embedded in the body-mind long after the event of threat.

If the threat is great enough to put the survival of the organism on the line then anxiety or distress results and can accumulate. This accumulated stress is released through emotional discharges such as laughing, shaking, raging, screaming, crying and yawing which seem to accompany healing processes. If this kind of healing is inhibited the distress will be impressed on the body and may lead to psychosomatic illnesses, postural dysfunctions. It may reside in the nervous system causing later neurotic behaviour or confusion triggered by current events.

Introduction to SENSING



It is common knowledge that we have FIVE senses. This view is rooted in a past where mystical symbolism of number was more important than a basis in fact. The inclusion here of the vital temperature sense expands the famous five to SIX. This number can be increased as soon as we consider that our sense of movement and balance in the inner ear is picking up information of three types - gravity, body movement and muscle action (position). So we could then say we have eight or nine senses.

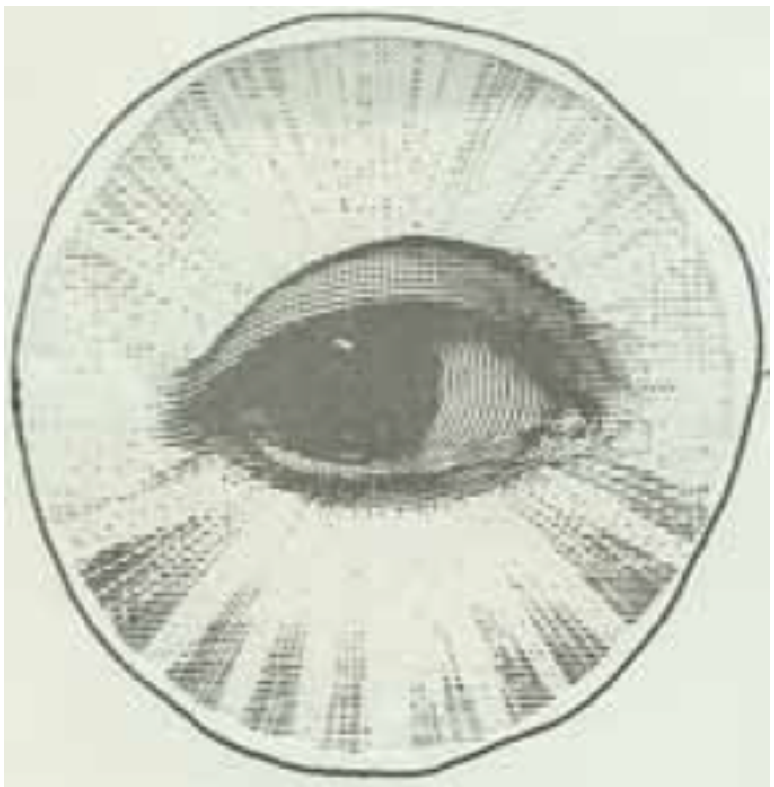
This number increases again if we categorise senses by their different nerve endings rather than by environmental conditions sensed - we would then include taste and other common chemical receptors as separate from the more sophisticated organ of smell; rods and cones in the eyeball separately perceive shade and hue; there are three types of touch receptor. By now we are up to about thirteen. A recent article in New Scientist suggests a 'radical' breakdown of sensory functionality leads to a total of 33 senses. And this is without complicating things with our ‘sense’ of time and rhythm, and pain.

Sensory pleasure is fundamental to our functioning. In our society pleasure has been made secondary to, and sometimes completely segregated from, work. Our senses evolved so we might survive and enjoy our good earth, and be productive. Yet too many of us find ourselves persuaded to live a life of sensory paucity.

Re-evaluating the essentially pro-life function of our thirteen or more senses by engaging directly with them, we may whet our appetite to evolve a new culture. One of whose main criteria would be to gain the maximum pleasure from our sacred time on earth.

There is also a challenge to the culture of the screen. A cybernetic culture which hardly acknowledges the diversity of our sensory manifold. We must break away from the screens flattening of our experience.

SEEING



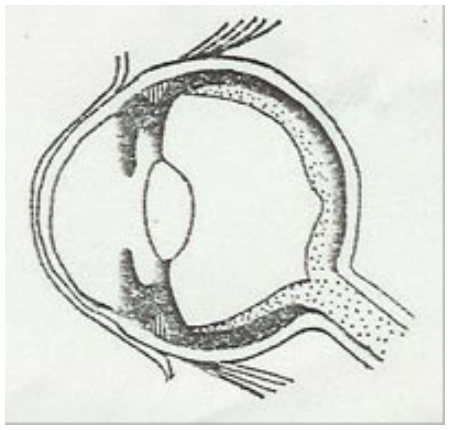
The eyes are capable of taking a much greater amount of precise information in a shorter time than any other sense. This is largely due to the nature of light.

The very high speed of light means that we can see things very quickly after they have happened. The time lag is so minute that it is of consequence only when we are looking deep into space. On earth the event and our visual perception of it are, in human timescales, simultaneous. Light normally travels in straight lines and this enables us to place things in relation to each other with great precision. This means that we can locate detail very accurately. It is also capable of traveling long distances in clear conditions. From a suitable viewpoint this allows us tremendous breadth of vision. From the cathedral spire we may compare the whorls of our finger prints, landforms 15 to 30 miles away and the crescent of a new moon.

Colours depend on the wavelength of the light. Shorter wavelengths are seen as blue. Then as the wavelength gets longer we see green, yellow, orange, and red. These pure colours are known as hues. Normal sunlight is a mixture of all the wavelengths and appears colourless. The human eye can discern a remarkable 10,000 different hues. The colour of objects is caused by the surfaces of objects reflecting some wavelengths and absorbing others. Tonal variations are caused by the amount of light of each wavelength that their surfaces absorb. Between the extremes of pure hue and blackness we can see about 20 shades of grey.

Therefore the combinations of shade and hue enable us to distinguish as many as 200,000 colours. Light's huge capacity for carrying information means that vision has come to be the boss sense of the information oriented modern world. The cultural dominance of sight is shown by phrases such as 'world view' and 'how you see the world'.

We value the wooly look of our cardigan rather than the acrylic reality. The visual emphasis of our culture will also devalue or ignore that which cannot be conveyed visually. The look of an apple becomes much more important as a sale criteria than its taste or texture. An otherwise bland product may be OK if it looks right. Advertising will even go so far as to discard any real characteristics of the product in favour of much a more exotic visual fantasy. Desirable images are artificially associated to the bland brand by an advertising campaign. Mundane motor cars convey to the user an imagined air of sexual potency or social power.



All this encourages a retreat from the direct use of our other senses into a misleadingly fanciful visual domain. The result is not only a loss of sensation from the other senses but a confusing overload of the visual perception. We are provided with such an onslaught of petty visual information that the untrained eye sees a lot but actually takes in very little. We can't see the wood for the trees. We are often left registering familiar shapes without ever seeing the new... the detail... the variation... or the growth... Rather than seeing the world as a habituated blur, the eyes could be used as a tool to obtain much more satisfying information.

Optical illusions

There are exceptions to the simple rule of physics that light travels in straight lines that may sometimes mislead us. Light travels in straight lines only in media of uniform density. When light enters water it will change direction. This accounts for the coins in the fountain not being exactly where they are seen to be.

The human eyes are evolved to make the most of light's complex characteristics but they do have their limitations. If we are looking at a bright red picture and then turn to look at a pale faced friend we may be excused for thinking they have a greenish pallor. This is because the eye has tired of seeing the red component of white light. The remaining wavelengths give the greenish tint.

Our mechanisms of memory and recognition will effect how we interpret the patterns of light that we see. We may know that a sheet that appears grey in dim conditions is in fact 'white'. As a result in some conditions we may perceive a sheet that is actually grey as 'white'.

Factors in these three areas can mislead us. It is important to check such sources of error when making crucial observations or when what we see is unlikely or controversial.

Recent studies have shown that the impact of colour sensation relates to the intensity of hue rather than to particular colours. Objects of brighter colour seem to be closer, larger and more prominent. Bright colours reflect coloured light onto adjacent surfaces and are more stimulating. The superstitions associated with colours are largely unfounded. Green is calming and red exciting only to the extent that a person has internalised this association. The association of red with heat and so danger, clearly has a basis in fact.

When understanding sight it is also useful to remember that light is a form of energy which the eye captures and the brain then uses to create a picture. The important point being the picture is generated by the brain and is not external to you, the picture is the visualisation of light, not the light itself.

HEARING

Sound is a simpler and less precise medium than light but it has one overwhelming advantage - It is always with us. The sun sets and leaves us in darkness, then sound dominates. Listening has a central place in the evolution of humanity and our social co-ordination through the use of language.

The source of sound is not only the external world - our own bodies produce sounds. Even in a sound free room we can hear the rushing of our own blood. Even in the womb, when we had never seen a thing, we registered the pulsing rush of our mother's blood. We are constantly and forever immersed in the sounds that surround us.

Perhaps this is why we first communicated and developed our language in sounds. We needed a medium that was always available to us. Language and hearing abilities are inextricably linked. Oral language is the basis of reading and writing skills and so central to the modern culture.

Sound is a vibration. A pulse of pressure that emanates from its source out through a continuous material. The motion uses up the energy of the vibration so that it gradually fades as it moves outwards. Sound vibrations travel at a constant 765 m.p.h. in air at 18°C. Compared with the speed of light this low speed suggests a more local and intimate medium. Sounds can vary in pitch from a high whine to a low rumble. This quality of pitch depends on the 'wavelength' of the vibration. Although it is the same word it is a very different thing to a light 'wave'.

Regular variations are heard as a pulse, beat or rhythm. So the three variables that are discriminated by our hearing are volume, pitch and waveform. Our conceptual sense of time passing gives a fourth set of variables, around such things as pulse, rhythm and duration, which become an essential part of the hearing experience.

As we have little or no control of our ears, as we do of our eyes which we can swivel and focus, much of our hearing faculty is perceptual. There is a mental capacity to sort out sounds into their component parts. We can listen to one instrument in a band when many others are playing or listen to one person in a room buzzing with conversation. This is similar to our ability to distinguish detail from mass with our visual perception.

The fidelity of our hearing perception breaks down in certain conditions. When a sound phrase is repeated over and over again a perceptual breakdown occurs and we begin to make imaginative changes. This may lead us to trance-like or dream states and is an effect obtained through the chanting of mantras.

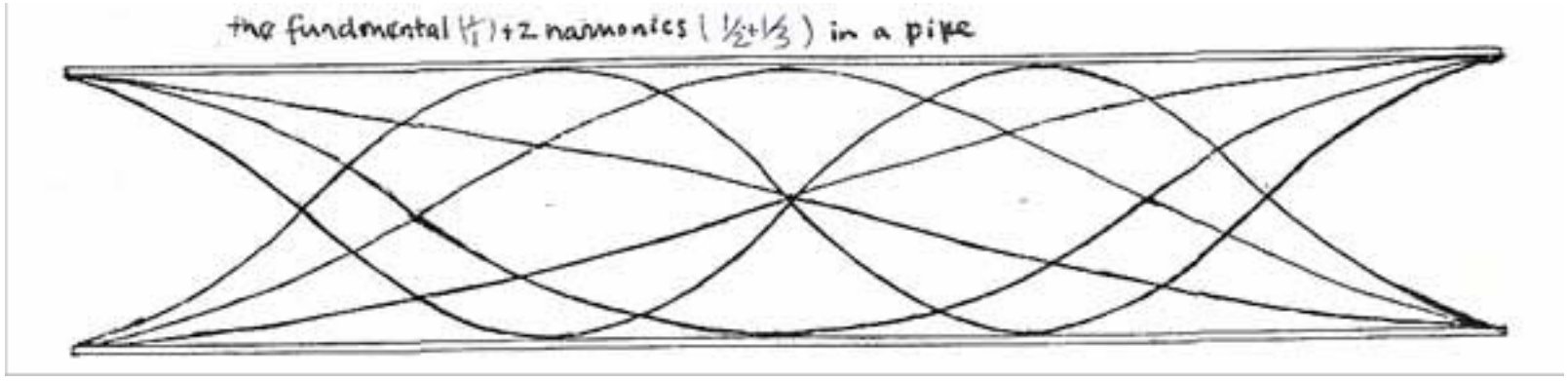
Although the solar forces of light have taken over much of our information handling our ears still retain a primal importance. If we 'are not heard' we feel profoundly powerless, misunderstood and alienated. Through language loaded with oral nuances of emotion we resolve and share our feelings with others. Given adequate un-reactive listening we can precisely pin-point causes of emotional block or turbulence. Skilled listening to each other's histories seems to be the only reliable path to understanding between people who appear to hold irreconcilable positions. In this sense hearing may even hold the key to global peace.

Musical Pitch

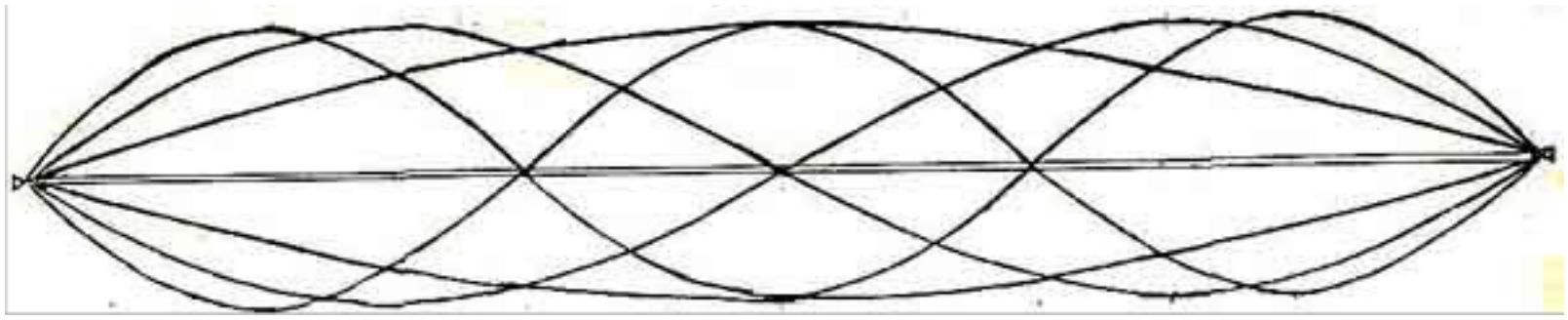
Production of Notes. Traditional western melody is usually produced on a pipe or string instrument. Probably because these resonators produce a smooth and mellifluous waveform.

Pipes. When the air in a pipe is resonated wavelengths that are whole fractions of the length of the pipe are produced (1/2,1/3, 1/4, 1/5, 1/6, etc). The wavelength, sound or note, that is equal to the length of the pipe is called the Fundamental. The fractions are called Partials or Harmonics. The fundamental and all the harmonics will always be present but usually one note will be considerably louder than the others. In a simple pipe instrument like the bugle it is possible, by the way we initiate the resonance with our tongue and lips, to cause any of the simple fractions to dominate. In this way a series of notes can be produced.

The notes that comprise whole fractions of the length of a pipe or string are called the Harmonic Series.



Strings. When a taught string is plucked it will also produce notes that are whole fractions of the length of the string. The dominant wavelength will depend on three factors: length, tension and mass. The relative loudness of each partial will depend on the resonator to which the string is attached and also the manner in which the string is plucked. The specific distribution of loudness and softness amongst the partials constitutes the ‘timbre’ of the instrument.



This diagram shows the fundamental (1/1) + 2 harmonics (1/2 + 1/3) of a string

The fundamental and other partials can be cancelled by lightly touching the string, whilst it is vibrating, at one of the nodes. If it is touched at the node mid-way along the length of the string, the fundamental and all fractions of the string which are of an odd number will be cancelled. If it is touched one third of the way along the string, the fundamental and any fractions which do not divide by three will be cancelled.

The above diagrams show the curved shapes of pure notes, but waveforms may take other shapes depending on what produces them. On top of the variations in waveform there may be variations in amplitude or loudness.

Consonance: A Western Preference?

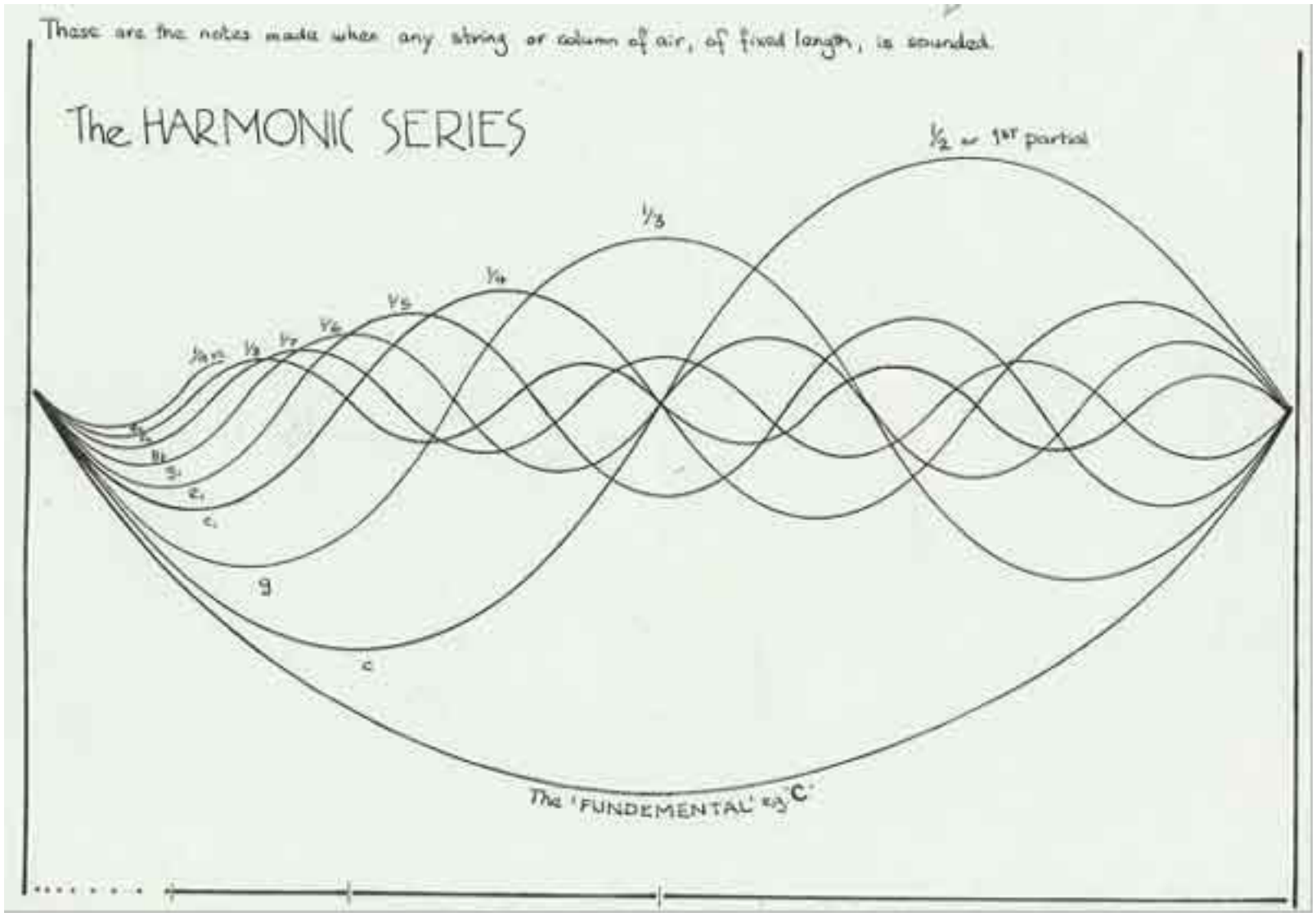
When wavelengths are in simple numerical ratios the result is smooth and pleasing. This effect was originally observed by the Greek philosopher Pythagoras, and later researched more thoroughly by the C19th scientist Hermann von Helmholtz.

> "When two musical tones are sounded at the same time, their united sound is generally disturbed by the beats of the upper partials, so that the greater or lesser part of the whole mass of sound is broken into pulses of tone, the joint effect is rough. This relation is called dissonance.

> But there are certain determinant ratios between pitch numbers for which this rule suffers an exception, and either no beats at all are formed, or at least only such as have so little intensity that they produce no unpleasant disturbance of the united sound. These exceptional cases are called consonance."

The Fundamental, 1/2 and 1/3 are almost perfectly consonant. The 1/4 and 1/5 are consonant with the 1/2 and also with each other. The upper partials become more dissonant. The 1/2th and 1/9th are dissonant to an extent commonly found to be agreeable, but most partials above this are dissonant in a manner many people consider unpleasant.

The first nine notes of the harmonic series are approximately consonant and it is amongst these notes that the bugler must find a melody. These consonant notes were the basis of western harmonic music.



note: Beats. When two different notes are sounded together, the combined note is found to fluctuate between maximum and minimum intensity at a regular frequency. e.g. notes of frequencies 500cps and 499cps sounded together will produce one loud period or beat per second. The number of beats per second is the difference between the two frequencies in cps (cycles per second).

SMELLING

The sense of chemistry: the sense that can tell us of molecular differences that are invisible to any other sense. The sense that reaches into the atomic nature of matter, that can detect minute traces and differences of great subtlety.

The fact that our sense of smell can respond to such minute quantities has lead to difficulties in the scientific investigation of the field. Effects of smells on our psychology have been claimed, although there is some doubt as to how much suggestion effects the results obtained rather than the chemical nature of the smells. For instance: Lavender, Orange Blossom, Rose, and Sage are said to be calming, whilst Sandalwood, Patchouli and Jasmine may alleviate mild depression. Treatments using smell are called aromatherapy.

Personally I have my doubts about such things although there is probably something real amongst a lot of pseudo-science and quackery. The relationship of smell to the process of breathing and via that to anxiety is, perhaps, more interesting. Attention to smell is attention to breathing. Attention to the rise and fall of breathing is thought to be calming and stabilising. The other point here is that pleasant smells are a powerful sensory pleasure, and pleasure dilates and relaxes the body.

Its original survival function in the selection of non-poisonous foods has become obsolete for most of us. And most of our ten million or so olfactory cells lie dormant. Occasionally, specialists in a variety of industries or connoisseurs of wine or cheese have reawakened this ability; the subtlety and precision of which is then a cause of wonder in us ordinary mortals. There are also chefs, herbalists, florists, perfumers, and real ale buffs who have achieved a super-nose level of performance. Their training methods are, however, rarely shared in public. One imagines that perhaps there is no conscious method and it is just a conjunction of a 'gifted' individual and a long acquaintance with a subject of interest.

Our senses of smell and taste, however undeveloped and vestigial compared with many animals, are still capable of guiding our food choice fairly well - but only amongst natural products. There is no naturally occurring toxic vapour that is odourless. However, synthetics will often give false, sometimes dangerously false, impressions to our senses and then our natural preferences can no longer be relied upon.

The sense impressions given by natural foods also guide us to eat a balanced diet. Processed or purified foods make these sense judgements less reliable. Refined sugar is a case in point. Our mouth recognises sweetness as a source of fast energy. Natural sources of sweetness are usually combined with various other minerals and useful nutrients that are necessary for the utilisation of this sugar. Refined sugar has none of these minerals and vitamins. In this way it tricks the sense. In groups like children who are naturally drawn to sweetness, sugar may lead to an unhealthy diet. If the use of our noses was included in our educational curricula perhaps we would begin to eat more healthily. Unfortunately the commodity food market has structured its business on our lack of olfactory discernment.

The vested interests behind the sugar industry can be traced back through a history of repression and exploitation to the days when African slaves were used to produce sugar in the West Indies under inhuman conditions. The sugar was then imported as a cheap energy food for the working class in England with the resulting tradition of malnourishment and dental caries.

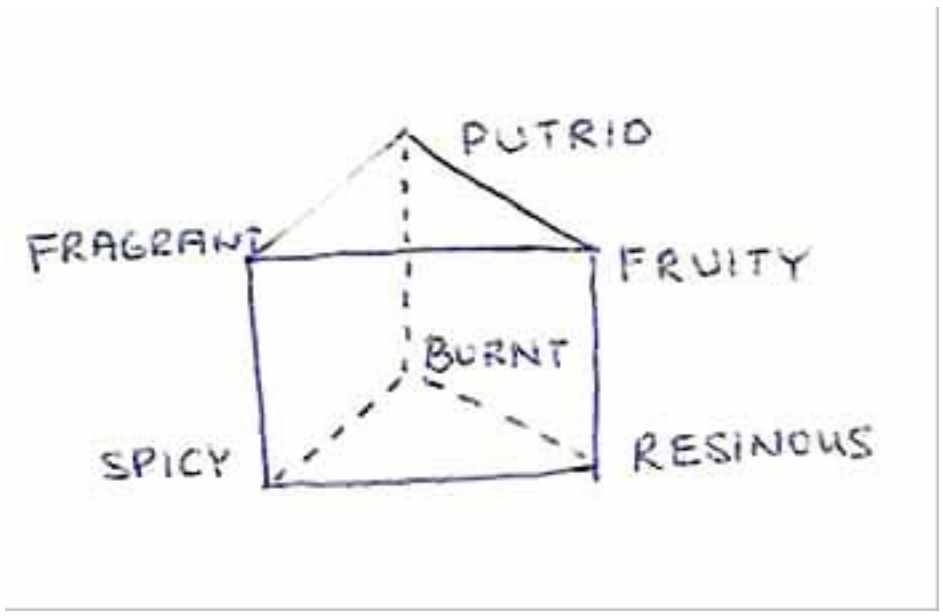
Foodstuffs are often be processed to reduce their smell to an acceptably banal level. Other products have smell added to them, often on a subliminal level. A product will sell better if it is slightly scented. Domestic products are often given strong floral odours to conceal their chemical nature - disinfectant that smells of Lavender.

On a local level this kind of deodorant culture may seem harmless enough, but it is all part of an alienating whole in which things are not what they appear to be. Commercial research on 'vapours as hidden persuaders' has obvious implications as yet another means of manipulating consumer desire.

Part of the problem of the scientific investigation into and understanding of smell is the difficulty that has been encountered in creating a catholic/universal classification of smells. However it is interesting to study the attempts that have

been made so far, if only to give us a range of adjectives to describe certain smells and group them as a memory and learning aid.

One of the neatest systems was proposed by Hans Henning in 1916. He tested more than 400 different scents on people, and then decided on a smell prism of only six main odour qualities:



Each of these categories can be further sub-divided.

A more recent classification of ten categories was proposed by Castro, Ramanathan, and Chennubhotla (2013) based on Andrew Dravniek's Olfactory 'Atlas' of 1985.

Fragrant

Fruity

Citrus

Woody and resinous

Chemical

Sweet

Minty or camphorous

Toasted and nutty

Pungent (like blue cheese)

Decayed or sour

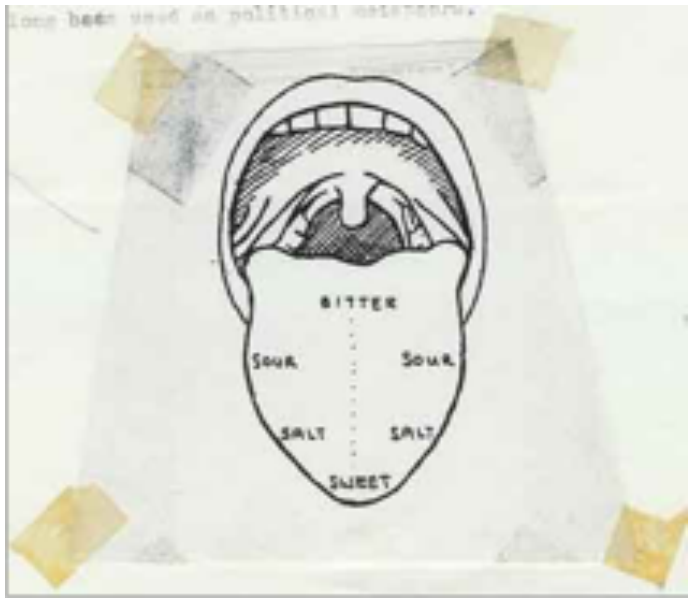
However it may be noted that none of these classifications has gained popular currency. Smell tends to resist universal classification.

Trace airborne chemicals may effect our sexual attraction for each other. This may, however, only be a part of a broader chemical interaction that happens between people during social intercourse. In recent years we may have been obscuring these signals through our obsession with hygiene. It would seem to be quite possible that we all give out smelly signals that are picked up by other people, often unconsciously, in the same way that many animals do.This may even be the way that actors gain rapport with their audience.

Note: There are two types of sweat gland, the Eccrine and the Apocrine. The products of neither smell. The Eccrine are distributed over the whole body. Their sole function is to increase heat loss when necessary by excreting odourless salt-water on to the surface of the skin. The Apocrine glands are concentrated in specific areas of the underarm, groin and buttocks. These excrete perspiration in times of stress, anxiety, and other emotional activity and also excrete a small amount of fatty substances. It is these substances which, if left on the skin to decompose, will cause body odour or BO. This smell will not be so bad if the bacteriological community on the skin is intact. Some conditions such as chronic anxiety seem to upset this. Daily washing with soap destroys these symbiotic bacteria and the body odour becomes acrid, requiring more soap or deoderising chemicals. Which in turn seem to perpetuate the conditions under which body odour thrives. Rinsing the skin with plain water is sufficient to remove the products of excretion and will leave the bacteriological ecosystem intact. Soap should only be used if the skin is so dirty that rinsing is insufficient. On the other hand the use of soap may be a excuse for self-massage which may have positive effects.

TASTING

Taste is a separate chemical sense and one that is simpler than smell. The taste buds are on the tongue and I learnt they were arranged in four quite distinctive areas of sweet, salt, sour and bitter. But some other cultures recognise a fifth - umami, the taste of glutamates or meaty flavours.



With regard to food the experience of smell and taste is often simultaneous and indistinguishable. Taste is often used to mean flavour which is the trans-sensory experience of touch, heat, smell and taste.

The word taste has acquired a strong historical meaning of conformity to a set of upper-class aesthetic preferences and social manners. It would seem that the rigid and simple classification of taste and the anarchic complexity of smell have long been used as class defining metaphors.

As I have noted earlier one of the key confusions of our inborn taste instincts, the desire for sweetness, also has a violent class history.

THERMAL SENSING

Perhaps more than any other, this is the sense that connects the inner world of body organs to the outer world of climate and cosmos. Our sense of temperature tells us all about the flow of heat in and out of our bodies. Heat flow happens all the time, whenever there is a difference between our body temperature and that of our environment.

This sense has in the past been included as part of the touching experience, the receptors being distributed in the skin and functioning simultaneously. We feel heat at the same time that we feel textures. In some ways this is a useful confluence of senses. Some important characteristics are shared. Temperature shares with touch a primal importance; the even steady warmth of the mothers womb can be shattered at birth and our adaptation to the varying temperatures of life after birth can be happy and smooth, or a matter of bare survival. It also seems likely, by the way our skin encloses us, that it is important to our sense of being and of our self-image.

In other ways the sense of temperature is very different from touch and the twinning of these two senses has led to confusion. Sense of temperature has a constant and absolutely crucial function in keeping us alive. As mammals our body metabolism must maintain a constant and steady temperature of 98.4°F or 36.67°C. This varies only within one degree F during the course of a normal day. Changes greater than this have drastic results on our body functions.

Continual warmth is essential to life. So the thermal senses must report continual changes of temperature and make body changes that retain or give off heat. This is done through a series of automatic reflexes which dilate or constrict blood vessels below the skin, initiate sweating or raise goose pimples. The central control that co-ordinates this complex process of temperature balance is the Hypothalamus, a substantial brain structure above the back of the roof of the mouth.

Another important difference between the sense of touch and that of temperature is that the temperature sense does not have to be in contact to give us sensation. It can, like the eye, monitor electromagnetic radiation, this time in the infra-red or heat spectrum. We can feel the heat of a fire without touching it!

As well as the automatic function we are also conscious of temperature sensations that give us our experience of comfort. This information directs our choice of shelter and clothing. It is often unacknowledged that this sense is central to the creation of those pillars of our culture - Architecture and Fashion. As soon as we realise its use in the formation of these art forms we begin to realise its importance as a sense in its own right. Previously it has been seen as an alarm to avoid discomfort rather than a source of sensual delight with enough complexity for cultural expression. This mistake has come about because architecture's visual qualities, together with its visual methods of production and dissemination, have obscured its true basis which lies with the sense of thermal delight.

The sense of shelter. From womb to room our experience of warmth signifies the living against the cold dead. We hope for a warm welcome rather than the cold shoulder. Hearth is closely associated with home.

The reason this sense has so much power, apart from its significance to life, is that through temperature difference it informs us of four quite different and important variables of the environment that effect our thermal comfort. These are:

1. The temperature of the air and/or of adjacent substances.

2. The radiant heat emitted from surrounding objects and especially from the sun.

3. The movement of air across our skin.

4. The amount of water vapour in the air (ie humidity)

5. In addition to these external factors it monitors conditions within the body.

Air Temperature

Different materials have different capacities to hold and conduct heat. When we touch or have our skin near to objects, we are given clues as to what they are made of by the heat flow to or from them. A steel rod will hold a large amount of heat and it will quickly pass it to or absorb it from your hand. Wood holds less heat and will feel warmer and 'softer' in this respect.

Air holds little heat and is therefore a good insulator. However, whether we feel air as cold or not will depend on air movement and humidity. Generally we are comfortable in air in the temperature range 60° to 70°F (or c16° to 21°C).

Radiant Heat

Radiant heat has some of the same properties as light. We can locate a heat source by feeling the radiant heat emitted from it on our skin and moving towards it. The sun feels hot because of invisible radiant heat. Visible light has almost no heating effect. In this way we can locate hot bodies without having to touch them.

Our bodies also radiate heat themselves. If we radiate more than we absorb, we can feel this heat leaving our bodies. Nearby surfaces that are absorbing more of the heat than they are giving to us feel cold. Wall materials that feel most comfortable in fluctuating weather conditions are those that provide a constant source of radiant background heat. This provides the kind of thermal stability that is required for the body to relax. If a wall material is cold we may insulate against the effects of negative radiation by covering the wall with heavy curtains, wood panelling or similar material. As water has a high heat capacity, a damp wall will feel cooler than a dry wall. Surface evaporation will give an additional cooling effect.

We are remarkably sensitive to radiant temperature. We will notice a change in wall temperature of 5°C although we may well attribute this sensation to a 'cold draft'. This common mistake implies a general lack of recognition of the importance of low-level background radiation as a major component of thermal comfort. The reason living in caves is healthy is that the radiant temperature does not fluctuate.

Air Movement

We can feel air movements that are not strong enough to effect our sense of touch by the loss of body heat. In hot conditions we sweat to produce the moist skin surface that is so effective in cooling us.

A barely perceptible movement of air is the requirement for comfort in equitable conditions. Still air dulls the sense whilst too much air movement cools us unnecessarily. Air movement is more stimulating if rising rather than sinking. This may be because warm air rises and cool air sinks.

Humidity

Humidity is the amount of water in the air and is relative to air temperature. Hot air will hold a lot more water vapour than cold air. The amount of water vapour in air is therefore expressed as relative humidity or RH. This is the amount of water vapour in a sample of air compared with the maximum amount of water vapour that air of the same temperature could hold. This is expressed as a percentage. 40% R.H. is considered a minimum for both health and comfort. The implications of humidity being relative to air temperature are:

- Cold 'damp' air will become dry if it is heated up. This is why it can be fruitless to try to improve the humidity in a dry centrally heated flat by opening the windows.
- The ease with which perspiration evaporates depends on the R.H. Sweating is not so effective in humid conditions.

- Very dry air, especially moving hot dry air, will absorb body moisture too quickly, drying eyes, bronchial tubes, sinuses etc. This may lead to soreness or the production of excess mucous and lower our defence to respiratory disease. 'Dry air' is air with an R.H. of 35% or less. 30% RH is often found in houses with central heating.

Although our sense of heat flow does not measure humidity as such, we get a good indication of humidity by the sensed air temperature compared with the skin cooling we feel around the nose and mouth as we breathe in.

Internal Body Conditions

The body produces heat as a necessary by-product of the body's internal and muscular activity. The rate at which we produce heat will depend on how active we are. Doing physical work we are producing around 150 kilo-calories whilst asleep we're still producing 50 kilo-calories of heat. Calories are a measure of energy. Nearly 3/4 of the calories that we consume as food are lost from the body as heat. This heat is lost by convection to air, radiation and evaporation of moisture from skin and lungs. We are acutely aware of this temperature balance between the heat we produce and the heat we lose. As I said earlier our internal body temperature can only be allowed to vary within 1°F. Outside this small range emergency measures are brought into play. Too cold and we get goose pimples, go paler and finally start shivering and looking for shelter. Too hot and we flush, begin to sweat and look for a cooler environment. If it is cool the muscles will tense, and body systems alert; if it is warm they will relax. Even the mental association of warmth helps us relax.

In normal conditions we sweat between 3/4 and 1/2 a pint per day. Strenuous exercise or very hot conditions cause this to increase to as much as 10 pints per day.

This sense keeps us very much in touch with the weather. Anyone who comes from a rural district in the United Kingdom will know how important this has been to our survival. The weather is still the first essential topic of daily greeting and conversation. "Good a morning, Bert. It looks like we're in for a bit of rain."

The sense of weather, the sense of architecture, the sense of fashion, the sense of security, the sense of living being. Perhaps more than any other sense the need for thermal stimulation is unrecognised in a world of controlled but static thermal environments.

> "Whilst we may provide for all our nutritional needs with a few pills and injections, no-one would overlook the fact that it also plays a profound role in the cultural life of a people. The thermal environment also has the potential for such sensuality, cultural roles and symbolism that need not, indeed should not, be designed out of existence in the name of a thermally neutral world." Lisa Heschong, Thermal Delight in Architecture 1979

TOUCHING

For the first nine months of our existence we are firmly enclosed in the womb of our mothers. The tactile sense of enclosure is one of our most important pre-natal experiences.

After birth, it is essential that holding and touching provide us with continuity and allow us to form a concept of our independent physical existence. Touch continues to reaffirm this existential security throughout our life. Touch is a sense of the skin which contains us, separating inside from outside, defining our form. Completely deprived of touch after our birth we would almost certainly perish. A great deal of touching continues to be a primary need at least until we are through the dependent stage of our development. It will retain associations of security throughout our life.

As adults we have needs for affection that are well satisfied through this sense. Direct contact with another person has the capacity to communicate caring with an intensity that no other sense can. However, sexuality and frozen needs from infancy often confuse any simple implementation of such meetings. Infant needs that went unmet at the time cannot be satisfied in adulthood. However hard we try, the anguished feeling of need remains because it is a memory, a recording

fixed by hurt, rather than a current need that is capable of satisfaction. Resolution is not through touch but by an emotional expression of the pain of the original experience.

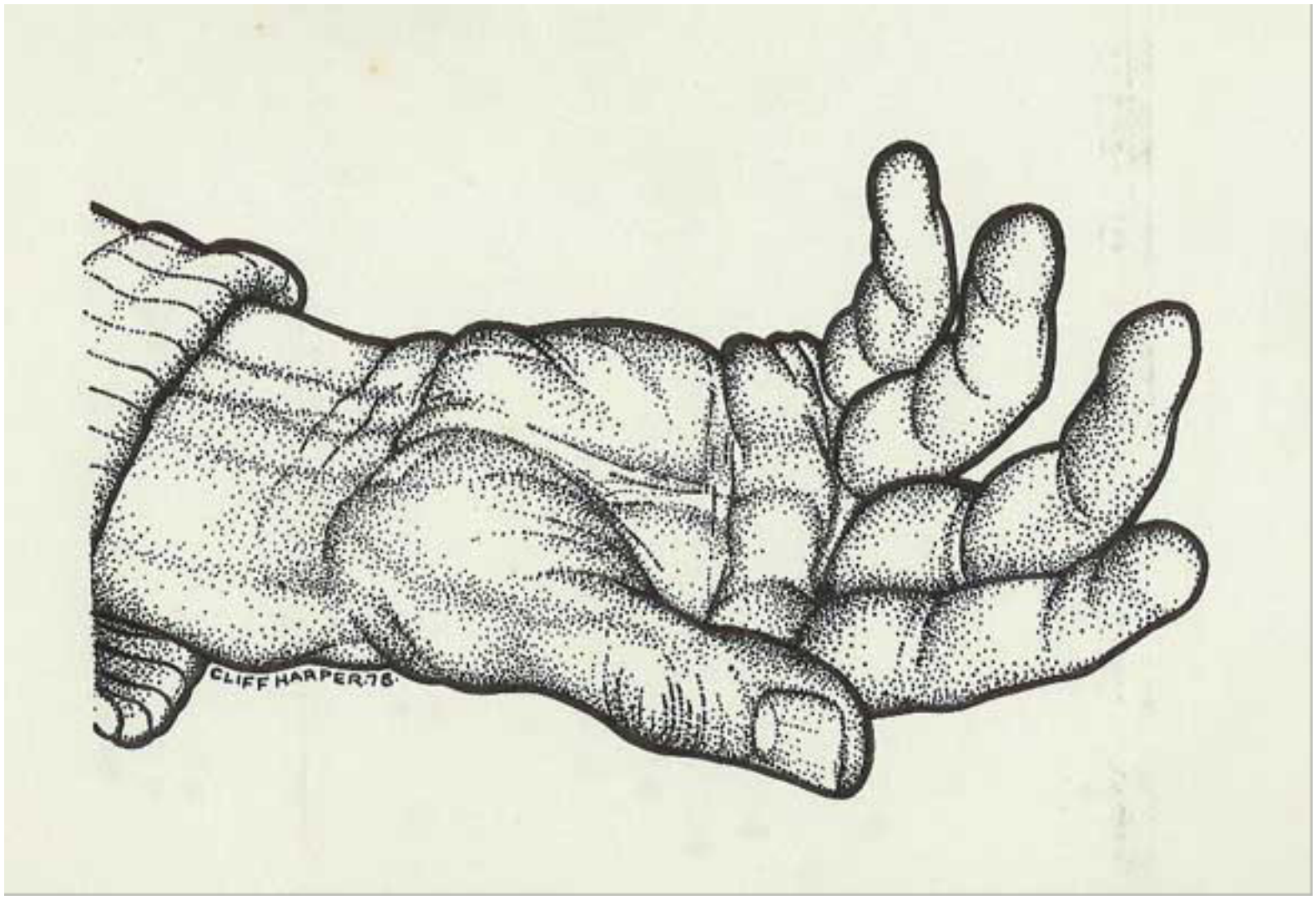
Touch is the sense without flux, without medium, making direct contact with the outside world. A dependable sense. When we touch an object we know for sure something is there. We are certain it exists. The lucky prizewinner may be heard to say: "I won't believe it until I get my hands on it."

Touch, more than any other sense, reassures us that the external world exists and is not just a dream. You pinch yourself to check you are not dreaming. This certainty and intimacy that touching gives us has imbued it with strong symbolic power.

The master lays his hand patronisingly on the head of his servant. Should the servant ever do likewise it is taken as an insolent and threatening reversal of etiquette. Relations between men and women are a good illustration of the power of this class custom. A man is expected to touch a woman first. For a woman to initiate an uninvited touch upon a man is usually interpreted as a sexual provocation through which the woman must appear as a ‘whore'. Only when a woman clearly has higher social status than a man can she initiate touch without breaking this taboo.

Sexuality is mediated through touch and is a powerful instinctual drive. For many people the enjoyment of touching another person is almost entirely tabooed by a myth-laden sexuality. It is possible, however, to learn to enjoy touch without it being weighted down with sexual innuendo. In addition sex might become easier, lighter, if freed from the burden of our touching needs. Fortunately hugging is becoming more acceptable in recent years.

It did not seem feasible to make any comprehensive attempt to deal with the touching aspects of sexuality, or provide exercises here about experiencing sexual pleasure without attracting a distraction from my overall aims.



MOVING IN GRAVITY

This integrated complex of four or five receptors will give us information about the physical realities of our bodies. Mass, acceleration, balance, orientation to gravity, relative position and movement of parts of the body, muscle tension and stretch, and the co-ordination of all these things. These 'mechanoceptors' will give us information about our postural and gestural expression and give us a picture of how we feel about ourselves.

How we feel about ourselves is usually derived from how we were treated in the past rather than the reality of how we are physically in present time. As we move and enjoy and explore this sense we regain a strong sense of our true physicality. A self-image that is not distorted by cultural expectations, misinformation and stereotypes or past experience. A self-image that has a much more real basis in mechanical efficiency, biological health, and most important, sensory delight. In this way we can short-circuit conditionings which demean our innate joy of being. This can be a great source of self-confidence. It can allow us to feel grounded and at home in our bodies.

As with all senses the input from this compound sense is a source of pleasure that is ours for the taking. Moving for its own sake is normally considered crazy behaviour so our pleasure has to be framed in all kinds of game structures or other acceptable physical activities. Only small children may freely explore this sensual area of pleasure, spontaneously playing with movement expression without rules and boundaries.

There are four main receptors that contribute to this compound sense. They are different from the preceding senses in that most of their messages do not enter the conscious mind. The information that they gather is sub-consciously co-ordinated in a brain structure called the Cerebellum or is part of fast reflex loops that pass through the spinal column.

The four main sense organs

1. The Pacinian Corpuscles. A type of touch receptor that is found in the skin of hands and feet but also in the tendons, inter-muscular septa, and around the joints. They are responsive to pressure.

2. The Labyrinthine receptors. These are located in the inner ear. Three semi-circular tubes are arranged in the planes of the three space co-ordinates. They are filled with a fluid called endolymph and lined with sensitive hairs. These hairs pick up the movement of the endolymph as the head is moved. A neighbouring tubular structure called the Utriculus is also filled with endolymph and lined with sensitive hairs. Crystals of calcium carbonate, known as the Ontoliths, indicate the direction of gravity which is always down towards the centre of the earth.

3 & 4. The Golgi Tendon organs and Muscle Spindles work together. The Golgi Tendon organs are tension recorders initiating inhibitory safety reflexes. The muscle spindles, which are complex organs, respond to the amount and velocity of stretch in muscles.

Posture

Posture is the integrated pattern of muscle use that keeps our skeleton upright against the pull of gravity. Ideally it is a clever balancing act in which vertebral bones poise one on top of the other with the need for the least amount of muscle action to keep us upright. This is rarely achieved. Whether through accident, hostility or ignorance of our developmental needs our survival has usually necessitated the building of various protective chronic expressions into our posture. Cow-

ering or thrusting the chin forward are common examples. These reduce the efficiency of the balancing act and of the co-ordinated use of the body as a whole.

In addition it is possible we simply mis-learn some physical actions by copying wrong models. The poor alignment of bones is compensated by muscle action. This results in these muscles being chronically tense. These hypertonic muscles further interfere with healthy body functioning.

A postural expression of pride, lack of fear, self-esteem and joy corresponds to an efficient alignment of the skeleton.

However it seems likely that negative feelings that are denied a physical expression will not disappear but find another expression in cellular distortions, allergies or other disease. To iron out postural idiosyncrasies without going to the original root of that chronic expression is like treating a symptom and ignoring the cause.

As we re-arrange our posture to obtain better functioning we should ideally allow any feelings expressed in the old body patterns to surface and be discharged. However, this is not so easy as the appropriate memories and associated emotions may not be available at the time the posture is changed. If feelings can be 'let out' the muscle tension eases and posture will tend to return to its natural state of efficiency. Perhaps the process of emotional release could be speeded up if accompanied by re-alignment work.

Taking a posture of pride and self-esteem is useful to contradict certain chronic negative conditionings.

The dynamic relationships between emotional expression and correct alignment have not yet been clearly worked out. It does seem unlikely that alignment work on its own is sufficient for holistic change. What alignment work or massage can do is give us a useful temporary relief from body misuse, backaches, headaches, tension etc and possibly prevent harmful effects from accumulating.

What is 're-alignment work'? Efficiency of movement is an ideal that comes from a consideration of the skeleton as a weight supporting articulated structure. It is the ideal alignment of the 200 or so bony levers of the skeleton that is our aim. This is the arrangement that will use the least energy for posture or physical actions. Our bones are pulled into action by muscles. This complex concerted effort of the muscles is achieved not by volitional control of muscles, but by having the correct idea of movement in mind. So if we aim to improve skeletal alignment towards a mechanical ideal we must condition our mind with ideal and accurately imagined movement.

To ensure that this idea of movement is correct or mechanically efficient it must be based on an understanding of the anatomical, neurological and mechanical facts involved. So, the first requirement, if we want to improve our own body use, is to gain at least some knowledge of the skeleton and musculature as a dynamic mechanical unit. Secondly, images depicting the forces involved and their ideation and direction of acting must be adopted. These images must relate to your own knowledge and experience if they are to be vivid. They must be able to be expressed in the vocabulary of your personal imagination. The anatomical knowledge, which is a basis for the widespread use of alignment imagery may be learnt in the following ways;

1. From the study of a full-sized skeleton considered as a dynamic mechanical frame.

2. By drawing muscles and skeleton.

3. Study of muscle charts alongside the palpation of a person.

If this factual knowledge is not absorbed the ambiguous nature of imagery can lead to mistaken and fanciful ideation that may do more harm than good.

Every bone will have at least two lines of force that express the direction in which the contracting muscles act upon it. So the detailed picture is a complex one. The forces involved, and the images we use, may fortunately be much simplified and yet still be effective. The most essential of these compound lines of force is that relating to the function of the spine as a central axis.

> "Imagine the central axis of the trunk as a sliding curtain rod, and watch it being elongated upward to raise the head to a higher position. This should be alternated with watching the spine lengthening downwards in the back like a kangaroo tail." Lulu Sweigaard, Human Movement Potential 1974

The spine is imagined as a central line or axis around which the body action maybe balanced. If we feed this idea to our imagination it will pass it on to the cerebellum co-ordinating centre and gradually, if we stick with it for many weeks, we will find ourselves being able to move more freely.

> "You need a long axis, I need a long axis. Everyone needs a long axis." Barbara Clark, Let's Enjoy Sitting, Standing, Walking 1963

There are other less DIY methods of improving the efficiency of our muscular co-ordination:

The Alexander Method: In this technique a student is shown better ways of using his body through gentle guiding in the hands of an experienced teacher. The old habitual relationships of the body are inhibited whilst the feeling of the correct use, as judged by the teacher, is experienced and gradually brought into daily practice. The wrong patterns of use are often quite subtle, and even when more obvious, they are often not felt as wrong. What we feel as 'right' is simply what we have adjusted to feel as normal. The correct posture may at first feel odd and awkward.

Feldenkrais Method: Moshé Feldenkrais taught that efficient posture could improve human functioning. Feelings of self-esteem are fed to the cerebellum to create a ‘awareness through movement’. Needs to be taught by professional teachers.

Many of the ancient methods of self-knowledge include postural directives as part of their training in an explicit or implicit way, for example:

Hara: A Japanese term that literally translated as 'belly' means the centred, balanced and imperturbable person. The essential three instructions on the way to Hara are:

1. Drop the shoulders. Let the arms hang heavy.

2. Release the belly. But allow some tension.

3. Breathe with belly on exhalation only. Inhale at ease.

Zen: The famous Zen Buddhist 'empty head' is often misunderstood to be some kind of metaphysical joke. However it may be understood as a straightforward physical instruction that relates to the feeling of an efficient relaxed posture. The head balanced on the spine will feel heavy if posture is in any way wrong. When accurate bone through bone alignment is achieved the head will feel light and 'empty'.

Revitalising this sense with serious realignment work or playful exercise will enable us to move through the earth's gravitational field with an increased sensitivity to our bodies and what they are capable of. Further training of this sense would facilitate the learning of all other physical skills and form a strong basis of self-knowledge for all activity. More than any other sense time spent in this area can lead to a profound sense of well-being and openness to change.

A note on ‘Interoceptors’. The New Scientist of January 2005 introduces a whole new category of internal senses that are not included in STA collection. These are the 'interoceptors', which measure things like 3 types of blood pressure, blood oxygen content, cerebrospinal pH, plasma osmotic pressure (or thirst), artery/vein blood glucose difference (or hunger), bladder stretch, lung inflation, stomach fullness etc.

Introduction to THINKING

Some popular ideas of the mind and intelligence are based on ignorant superstitions. These limit us from realising anything but a fraction of our potential capability. Not until the Renaissance period was it realised that our thinking centre was located in our head and it is only in the C20th that our knowledge of the brain has had much of a basis in fact.

The division of students into Arts or Sciences was considered soundly based educational philosophy which was particularly convenient for the development of an efficient technocratic society. It has recently emerged that a 'scientific' or 'artistic' bias is simply an unbalanced brain; for it 'seems that the the right-hand side of the brain is concerned with mainly creative work whilst the left half does mainly calculation work. There is actually no good reason why the two 'halves' of the brain should not be encouraged to develop in a complimentary way.

Another common misconception is that the brains ability decreases with age. Actually the reduction in number of cells by those cells that die as part of the ageing process is a minute proportion of the whole which is not enough to effect intelligence. In fact with an accumulation of knowledge and experience the brains potential should increase with age.

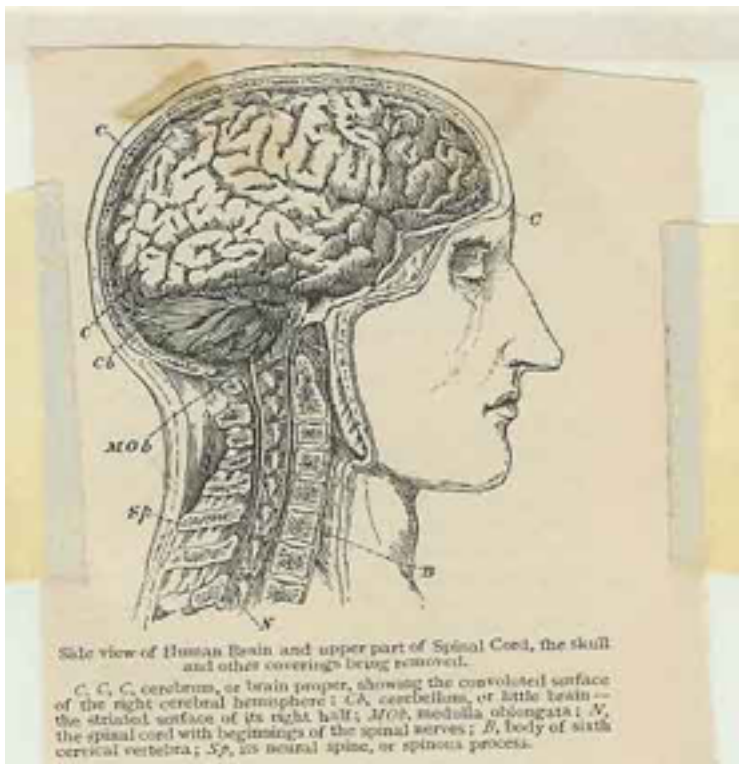
Irretrievable forgetting is another idea that seems to be wrong. When we can't remember, the information is only temporarily inaccessible, and may be remembered if we know the reason why it is obscured. It now seems likely that we permanently store most of our experience from the period of our foetal development in the womb when our sensory faculties first formed.

Another fallacy is that we inherit a level of intelligence (IQ) from our class or racial background. Although we may acquire characteristics of the culture that we are brought up in they are transmitted through the behaviour around us rather than on a genetic level.

These examples of misconceptions about our thinking abilities serve to illustrate the confusion that surrounds our common power to think. Thinking is everyone's prerogative. It is only negative conditioning that leaves most of us feeling dependent on the thinking of experts and authorities. This is a core myth of class oppression.

We are the product of our senses and the sum of our conditioning. The accumulation of experience creates the characteristics of human behaviour and intelligence. There is no reason why we should lose our soulfulness or poesy on account of this prosaic explanation. As we become adult this process may become more consciously directed and if we have the know-how we can choose to become whoever we want to be at any time.

The Physical Construction of the Brain



Side view of Human Brain and upper part of Spinal Cord, the skull and other coverings being removed.

C, C, C, cerebrum, or brain proper, showing the convoluted surface of the right cerebral hemisphere: *CA*, cerebellum, or little brain — the striated surface of its right half; *MOb*, medulla oblongata; *N*, the spinal cord with beginnings of the spinal nerves; *B*, body of sixth cervical vertebra; *Sp*, its neural spine, or spinous process.

The brain is physically composed of several hundred million nerve cells. Their surface is extended into a mass of filamentous dendrites.These bring information to the cell. A single thicker nerve, called the axon, carries information away to other cells. The 'n' million brain cells are thus interconnected by a complex network of fibres. Areas of the brain with specialised functions may be identified, but they do not seem to be structured differently or to have centres.

The information traveling between brain cells is in the form of an electromagnetic pulse which travels along at about 300 ft per second. Each cell will need to receive information from several sources before it is triggered to send an impulse out along its axon. A 'decision' will not be made until verification is received from various sources. This allows us to sort out priorities, and acts as a safety check against overhasty responses. It also allows subtle judgments of timing.

Repeated responses develop preferred pathways through the network. These 'preferred pathways' become habitual routes which may be used in a semi-automatic, unconscious or intuitive way. Both muscular movements and patterns of thinking develop 'preferred pathways'. These habitual neural routes will change only when we deliberately change our habitual thoughts or actions.

I have structured the mental section by popular conceptions of mental functioning. Memory and Association are relatively mechanistic mental processes by which information is stored in an orderly way and retrieved. Memory and Association each has a separate section of exercises.

Imagination represents a more sophisticated level of functioning in which playful use is made of our ability to mentally replay and combine previous experiences. It may be conscious or unconscious and may be seen as a combination of the process of association with the mysterious thought process of intuition.

Thinking that is goal seeking, problem solving and logical is the last category to be considered. This may also be conscious or unconscious, rational or intuitive. There is a major difference between the two.

Intuition is a largely unconscious and multi-dimensional process utilising the resources of the whole mind to reach a decision - often at lightening speed.

Rational thought is the more linear and conscious process of problem solving, primarily utilising a language. As languages are a means of communication that define culture, rational thought is forever welded to the social and cultural.

All five processes probably happen all the time in different proportions. The reality is not of separate abilities, but a unity of body-mind directed to a purpose. However for the time being the mind exercises are organised into these five categories. A section on Emotion is added as it effects our clear thinking.MEMORY

MEMORY

The memory mechanism of the brain may be crudely likened to a computer. Its operation depends on definite real conditions. It reacts to information from sense impressions and thoughts and, if conditions are right, stores the information relative to past experience. Current perceptions and conceptions are recognised by their similarities with past events in the memory store. This operation is by and large automatic and can happen without the overriding control or direction of the conscious mind.

The infant comes to recognise certain repeated experiences as significant to her ongoing comfort and development. These become key impressions in the development of memory and of mind. Other repeated or powerful impressions are also coded, remembered and their use or meaning sought. This evolution of key grouping may later become conscious, but for at least the first 6 -12 years it is dependent on the environment.

The mind 'remembers' by connecting key impressions and word concepts together. To some extent you can become aware of this process going on in your own head. For instance you are telling a friend about an experience. Key images, words and feelings seem to be simultaneously present. Linear sentences of speech are spontaneously constructed around the more diffusely structured basic memory information.

Memories are automatically referenced, to give meaning and value to current experience.

Short term memory

Most of the information continually pouring in through our sensory windows is of momentary value only. It serves to give experience continuity and allows more important events to happen in a particular context. Most of this input vanishes within a few seconds. You might not remember the pattern of linoleum in a much frequented bathroom not because your memory was bad but because you had never created the conditions for it to enter your long term memory; it was not significant. Another example of short term memory is with telephone numbers. You can look up a number in the book, cross the room and dial it correctly, but 5 minutes later you may have no idea what it was.

Short term memory is limited to 10 digits repeated consecutively, or equivalent in other media.

Long term memory

The more powerfully an experience is remembered, the greater effect it will have on present day activity. Memories are not just passive lumps of data. 'Memories' make up who we are and how we react to the world. Our experience becomes us.

The strength of the memory trace is dependent on the following criteria of retention:

1) primacy and recency

2) categories

3) difference

4) sensual power

5) repetition and review

6) personal interest - use value

7) attention

8) preparedness.

These factors will decide the prominence of any perception in the mind.

Diversified review for flexible recall

A memory is not usually an isolated piece of data, but a part of the total experience within which it occurs. Memories of facts are therefore linked to a particular context, to other similar facts or whatever. One of the keys to creativity is to relate facts not normally found in the same context to each other. This is difficult if the context within which a fact is remembered is always rigidly similar. e.g. A person always seen in a particular setting may be difficult to place when s/he turns up somewhere different.

A fact linked to various contexts in the process of reviewing will be able to be recalled in a greater variety of circumstances.

A note on 'Bad' Memory and Forgetting

Sigmund Freud was the first to point our that forgetting was often due to the repression of a painful experience associated with that memory. This theory has been borne out and expanded in recent times by researchers.

If the right conditions are present any experience will be remembered and will easily be recalled when the prepared signals are given. If the memory doesn't work it is because the necessary techniques were not used. If the memory still doesn't work then accumulating hurt associated with that experience has isolated that memory recording. Recourse to techniques of obtaining emotional release or discharge of the hurt may release the memory.

On the other hand old memories can be awakened by simple associations in our lives and will be replayed like a stuck record, often playing havoc with how we feel, and obliterating our capacity to think well. Such old recordings can become chronically played throughout our lives - giving out a constant barrage of negative messages that we aren't good enough or whatever.

The simplest strategy to avoid forgetting is to over-learn. This means not stopping learning as soon as you can 'repeat it without looking', but continue to impress the material upon the mind. Fear of the consequences of forgetting is not a useful method of producing results.

ASSOCIATION

First a item is stored with the total environmental experience in which it is perceived. Then it is categorised within the brain by being linked to other items with similar characteristics. This mental linking is known as the faculty of association. To remember a new thing we need to think of something associated to it. We need to make a connection with something we already know. In this way our thinking proceeds by a very complex and subtle chain of association or interconnections. Another way of type of association is pattern matching. This ordering of similar patterns is perhaps the most fundamental aspect of mentality.

Some items are stored in a sequence or in a particular set that can only be recalled by the name of the group as a whole. Other things will be linked to an enormous range of different facts, feelings, objects and sensations.

Repeated associations may become habitual, and provide a line of least resistance; a particular perception always invokes a particular response. If this response becomes unsatisfactory or obsolete then we may consciously decide to associate along weaker non-habitual links to find a more appropriate connection or 'idea'. This breaking out from the normally preferred pathways of thought is sometimes this known as lateral thinking.

The particular pattern of habitual association that anybody accumulates is seen as their outlook, personality, preference, priorities and values. Two people may be crudely compared by the different associations they make with a basic object, word or shape. But, an habitual association with an early experience of pain or hurt can produce quite irrational or bizarre behaviour in later adult life. To some extent this can be countered by taking on a positive direction. However, long lasting relief may only come after an emotional catharsis or breakdown.

I spoke in the ‘Thinking’ introduction about the formation of habitual patterns of thought or preferred pathways. They have the advantage of facilitating quick response. There is a strong analogy that can be drawn here with routines in daily life. Routine allows one to develop efficient methods of doing mundane tasks; leaving more time for what you want to do, above and beyond the mundane. Preferred pathways also have this sort of function in allowing much repeated behaviour to be done without rethinking it afresh each time.

The same disadvantages follow to some extent on both levels. Rigidly developed and repeated routines lack flexibility and may not be able to adapt to changing conditions. The same is true for fixed modes of thought. Flexibility seems to be a natural quality of the brain’s preferred pathways which only become rigid or inflexible through connection with hurtful experiences.

Core associations

- Contrast or opposites eg. sharp and blunt
- Resemblance eg. icing and snow
- Cause and effect eg. money and wages
- Whole and parts eg. engine and piston
- Contiguity eg. Factory and worker
- Genus and species eg. mama and Whale
- Sign and thing signified eg. cross and Jesus

Meaning and symbolism

Association is an important mechanism for it gives the objects and processes of our world meaning. A thing and its associations are one. The total meaning of anything is its associations. A thing may have associations from:

1. Its use, e.g. plough/ furrow/ earth.

2. Mental connections.

3. By ritual or repeated connection and subsequent use as a symbol eg. the communion wafer that is ‘transubstantiated’ by the ritual of mass into the body of Christ.

In this way a simple thing may not be so simple in the mind. Mentally it may be associated with powers or qualities that it does not, of itself, possess. It represents values possessed by the something else it is associated with.

It is clear that strong symbols can focus the emotional power of our needs and fears with incredible vigour. In primitive times the objects were chosen to represent the supernatural powers and forces beyond everyday experience and comprehension. This served to reduce fear of the unknown by ritually calming the power of frightening phenomena. In modern times these symbols still exist as objects that retain some of their psychic and emotive powers.

All things share the value of the things associated with them to some extent but symbols do this most powerfully. They can represent in one object, a belief which is otherwise an abstraction. e.g.. a tree represents ‘life’. If you choose to wear a gold key around your neck to represent your ambition to overcome the difficulties of life and get what you want then you might do well to invent a ritual to 'give life' to the key. The main invocation of which might be: "With this little golden key, I'm going to get all I want". Note the difference between the above phrase and the weaker: "This little golden key is going to give me all I want”.

Environmental influences

Memory recordings include all environmental perceptions. If you experience a certain state of mind in a room with orange walls or when a particular melody is playing, the two things become linked. In this way we develop a range of personal tastes by the subtle association things evoke. Otherwise our cultural group may inform us of values that have been produced by our social history. Gold signifies wealth and power because of its rarity and by association with the sun', and gilt signifies gold-like.

Your surroundings will imbue your life with meaning by association both from your personal history and from social consensus. As well as that your surroundings will become associated with the life you have in them. We normally choose our present experiences in sympathy or in reaction to our early experiences. Poor associations, like a drab environment, can exert a continuously enervating effect. Our surroundings are commonly chosen for:

1. Irrelevant economic and political reasons.

2. Purely functional' reasons.

3. Social reasons eg. to be in fashion or socially acceptable.

A note on Meditation

It is possible to isolate the basic memory and perceptive functions from the higher level processes, which occupy so much of our time, simply by 'not thinking'. This allows us to look in a relatively objective way at this whole process, and seems to have a number of positive features.

Our thinking mind is rested from racing around in circles chasing its own tail. When the dust has settled our consciousness is allowed a refreshing draught of present time reality. This can be a profoundly reassuring awareness. We are more clearly aware of a perception starting, being considered by the mind and the associations which it brings. This is closely allied with physical relaxation.

Meditation allows you to separate what is happening now from the associations that often cloud present reality. Things take on their actual unique identity in the present and are not confused with associated feelings from the past.

Intermediate meditative practice also allows the cognisance of thought itself. The principle being that if a thought or impression may be observed in its arising, its continuance and its dying away, we have come to know it objectively. Once it is known in this way it will not have any mysterious power over us.

INTUITION

The word 'intuition' is used here to include all types of problem-solving or goal-orientated thought, from simple value judgements to theoretical hypotheses which entail a complex and simultaneous use of all mental resources. Special qualities of intuitive thought that result from its non-linear use of the whole mind are high speed of operation and the decisive evaluation of many possibilities. If we are attuned to its use this 'faculty' will allow us to respond quickly and yet flexibly to new and complex situations.

Intuition manifests itself on both mundane and magical levels. Many results of intuition are assumed to be ‘instincts'. We seem to just 'know' the answer to a request for advice without thinking. An appropriate response is made without a pause for thought. It all seems quite 'natural' and therefore instinctive. Most of our judgements on which we make daily choices, like when to cross a busy road, are based on unconscious thought processes that are a form of 'intuition'. It is difficult to draw a clear line between 'instinct' and 'intuition' and I have a hunch there is a close rapport between the two. I'm defining instinct as pre-existing whilst intuition relies on experience accumulated since conception.

It is when intuition gives answers to original questions as if from nowhere that its incredible potential is noticed. It may often provide such penetrating insight that we assume it must come from an outside source. e.g. an answer to prayers or a symbol seen in the random patterning of tea leaves. We find it hard to credit our own minds with this mysterious capacity to seemingly leap through the unknown.

Preparing the Ground

Without doubt the greatest obstacle to the free flow of intuition is physical tension and mental anxiety. Tension and anxiety tend to happen together. However, we may change our situation so we are more physically relaxed and not plagued by worries. We may also neutralise much of our anxiety by consciously striving to have a positive frame of mind. Never forget that negativities interfere with mental functioning. The other preparation we can make is to saturate the mind with relevant information.

"It is always necessary first of all, that I should have turned my problem over on all sides to such an extent that I had all its angles and complexities in my head and could run through them freely without writing. To bring the matter to that point is usually impossible without long preliminary labour." Herman von Helmholtz 1891

This priming of information is better absorbed in the form of multi-media presentations, live events or contextual environments, as a total experience will provide more mental connections than reported verbal information. The more diverse and rich the relevant mental landscapes that can be prepared, the more likely intuition will turn up a choice of novel and appropriate answers.

Most of the judgements we live by are intuitive, in that they are not based on rigorous rational analysis, objective evaluation or proof. For instance I would say that a large part of our personality is formed by conditioning rather than hereditary factors. The evidence indicates this but doesn't prove it conclusively. The weight or value attached to each piece of evidence is decided intuitively. Many such questions with important implications for social organisation are, finally, intuitive judgements on factual evidences and should be held in some degree of doubt.

When people hold an intuitive judgement in common this gives it considerable weight. The judgement is sometimes spoken of as 'normative'. And yet this is not in itself any proof of its correctness, eg. only a few hundred years ago practically everybody firmly believed the world was flat.

Estimation of the value or usefulness of information received is the main day-to-day business of intuition. It is the facet of intuition that continually and invisibly supplements rational thought. These judgements are very reliable when they are based on recent direct experience. They become less reliable as they are based on less intimate and recent acquain-

tance. Intuitive judgements as to the intrinsic values of normative moral, ethical and aesthetic precepts are the most doubtful.

"Where there is conflict the more self-evident proposition is to be retained and the less self-evident rejected." Bertrand Russell Problems of Philosophy 1912

As intuition is unconscious, how do we train it? Well, it seems that we cannot improve it directly. It is more a matter of preparing the ground and removing obstructions; being receptive to results in any form; checking with rational procedures wherever possible.

Being Receptive

People often assume an 'intuition' will appear in the form in which their thoughts tend habitually to operate. But an 'intuition' may appear in the form of a picture even to an intellect that has tuned itself exclusively to words. An intuitive answer may be symbolised or 'hidden' in a found object.

> You will have to 'follow your nose'. You turn left earlier than usual because a curious house facade has caught your eye. Further on you take an alley to get back onto your route. Down the alley is a dustbin with an intriguing box of old papers beside it. You rummage furtively and out slips a copy of 'National Geographic' October 1935 which has 'Demon Possessed Tibetans and Their Incredible Feats' with 12 natural colour photographs. Which turns out to be a great source of inspiration for that street theatre piece you are currently working on.

Too much conscious focus on getting results may interfere with this process. If you 'look' for an intuition you may not find it. Results will be presented as an integral part of your life.

There are ways of coaxing the intuition to supply verbal answers to to questions. The most simple to use of these is the Ouija Board. The disadvantage of this sort of crude manipulation of intuition is that mental filters are by-passed and the questions used may dredge unwelcome material from the subconscious. Emotional needs create fantasies which are incorrectly interpreted as fact. However, the Ouija Board does seem to demonstrate a ‘group mind’ facet of intuition.

Checks and balances

Intuition is fast and comprehensive but it is also subject to our weaknesses. The vested interests of our present situation and background may bias the intuitive process in many subtle as well as crude ways. Superstition and our inherited culture will condition us with much out-dated information. Intuition can only work within the totality of who we are. The more aware we are of our personal and cultural background and our emotions within this framework, the more we can see when the clear light of intuition has been clouded by emotional pollution.

On a more specific level we can check intuitions of particular importance with rational procedures. It is interesting to note that the speed of intuition can provide crucial information before emotion occludes clear thinking. We may see a man's evil intent for a fleeting moment before his great beauty or charm enamours us. We can make use of this in a situation where we feel stuck. The rational mind is not getting anywhere, so we may decide to spontaneously strike out at a tangent and do what seems to be a random action (hopefully it is guided by intuition). Repeated, this will sometimes lead us out of the deadlock.

By being open to the unknown power of our body-mind intuition may be capable of feats at present considered metaphysical or magical. As with imagination, we are unsure of the limits of its power. Some people suspect that in some circumstances it can transcend time and space! It seems feasible that our understanding of physics will soon get to the point were this does not seem so outlandish. The electrical energies of thought do seem to exist and interact on a molecular level.

Another idea is that intuition can tap the cultural wisdom of a people. By being open to transpersonal values, symbols and gestures we may engage our minds in a kind of collective consciousness. Such intuitive thinking, animated by the imagination, are an integral part of our socialisation.

For the present we should be open to the possibility that each of our minds is probably capable, at its best, of making a synthesis out of our accumulated experience and knowledge which goes well beyond any mundane ideas we may have of our capabilities. And, at the least, intuition gives the mind, at all times, limitless creative potential.

Improvisation could claim to be the activity in which our potential is most fully extended. The intuition allows us to improvise thought and action at great speed. This enables us to deal with complex, dynamic situations faster than we could ever think them through consciously. Improvising freely we can achieve a unity between our sensory experience, our intuitive power, and rational ideology. I have included a range of improvisation exercises covering all sense media plus language, as the most apt field of 'practice' for intuition.

IMAGINATION

To imagine is to form experiences in the mind. These can be recreations of previous experiences more or less as they happened such as vivid memories with imagined changes. Or they can be completely invented and possibly fantastic scenes. We can also imagine sensations abstracted from their matrix of experience.

An imagined experience is such a rich and complex mental process that it may appear to gain a life of its own. In other words, an imagined experience may take off and progress through time, with 'unexpected' twists and turns like a real experience. But because it is a fabrication of our own mind we also control or guide this experience, manipulating it in a way that we can never manipulate reality. In our imagination we can take risks and be more playful than is possible in real life.

So imaginative experiences, however fantastic, are constructed from the bricks of sensory experience. The ability to fully memorise sensations and draw on them to create vivid imaginative reconstructions has, to some extent, been lost to most of us in the ‘West’ through the early emphasis on words and labels. The natural ability, to draw on memories of sensation rather than their labels is easily regained through training.

Imagination will naturally tend to include images from all the sensory areas in the same way that real life is a mingling of all sensations in varying proportion. We can, however, decide to imagine one particular sensation predominantly or exclusively. The exercises suggest we practice the memorising and recollection of sensations in each of the senses. The extent to which our imagination provides a total experience is demonstrated by our physiological responses which will often react as if the imagined scenario was real. Imagine a monster and your heartbeat will rise and adrenaline increase, even though there is no need to 'fight or flight'.

Even body functions that are normally regulated automatically may be changed and even controlled by suitable imaging. More general images may be used to aid healing processes and improve postural functioning. In these ways the profound relationship that imagination has with our body functioning may be glimpsed. Some insight into the extent of body-mind unity may be gained. It is of course in this area that the imagery of spells and other sorcery have their 'magical' effects.

Because of the mental complexity of the imaginative flow a myriad of associative connections are possible at any moment. This explains the unexpected directions in which the imagination can go. It means that imagination is a very creative mode of thinking. A major component of creativity is that endless possibilities are presented to the mind. An abstract idea given a form that can have 'life' in our imagination is likely to be useful because multiple associations are more easily made to an imaginatively formed idea than to an abstract idea.

Although imagination is usually playful it can also have a survival function in providing 'sensory pleasure' that is lacking in the environment. People can survive the most adverse realities by retiring into their imaginations. Children survive parental neglect by inventing parental surrogates from their comfort blankets.

Another function of imagination is to give one a change of viewpoint. We can imagine ourselves seeing the world - and ourselves in it if we desire - from places we do not in reality occupy. Plato was said to view everything as if from a lofty rock. Or we can imaginatively enter the viewpoint of another person and may learn something of what their experience is like. We can imagine change to ourselves and to the environment to motivate ourselves. We can also imagine how things might develop in various ways. We may then make decisions about present actions in the light of their imagined probable consequences.

The danger of a weak imagination is that it will not accurately predict reality. We may then either reject an imagined possibility when the reality would have had unimagined advantageous qualities. Or we may be drawn by lurid fantasy to experience a reality that is actually banal.

The weakness of our imaginations is continually exploited by the image merchants of the advertising industry. The confusion between reality and image can be most disastrous in the images of ourselves that we try to live up to. Our real selves might feel inadequate so we assume a glamorous media personality, eg. I once thought walking with cowboy bowed legs would make me more 'manly'. All it did was wear down the outsides of my soles and give me backache. People will often fabricate a complete personality or body image for themselves made of commodified images. In this way consumer ideology alienates us not only from the world but from ourselves through the colonisation of our imaginations.

Imagination, because it is not in itself a focusing method of thought, will often require an entry vehicle, context or direction from the real world to set it in motion. Sometimes a cardboard box is all we need to imagine ourselves in a moon buggy. Other times more complex rituals may enable us to have spiritual experiences or appreciate a larger reality like seasonal change. eg. May rituals.

The danger of imagination may be that we can get lost in it. Fearful imaginings and worries can separate us from a connection with our safer present time reality. A meditation exercise is included as an antidote to imaginative follies.

Dreams: Sleeping and Waking

Our conscious mind, of which we are aware during normal waking hours, is only a fraction of our total thinking mind. A great deal of sorting / evaluating / symbolising / choice making goes on in our unconscious mind without us knowing about it. Dreams give us a direct access to this veiled area of the mind.

Our sleep alternates between two types of sleep. Each night deep sleep is broken up by four or five periods of dream sleep. Everyone has dreams although the extent to which they are remembered is another matter. The function of dreams is not known for certain. This is not so surprising when we consider how little is known about why we need sleep itself.

It is also possible to reach dream states whilst we are awake. Some people will naturally 'daydream' more easily than others but there are techniques available that allow everyone to generate waking dreams.

Dreams can vary from those that seem to have a life of their own to imaginative fantasies whose every twist and turn is willed; from a series of inconsequential images to the most profound insights; from a sensual erotic aquatic delight to a nightmare so disturbing one is jolted awake as ones only escape.

To some extent dreams may be directed and controlled, and practice increases our ability to do this. Consciously directed waking dreams may be seen as exercises in the use of imagination. There is some doubt as to whether we should regularly interfere with our sleep dreams as their biological function is so little understood.

If dreams are semi-automatic and of unknown function then what use can we make of them? It has been suggested that deliberately ‘dreaming’ of clear sunshine, bright stars, huge rivers, can help to keep our bodies healthy. This is possible if one considers the fantastic claims made for the psychosomatic powers of visualisation.

Dreams may be used to solve problems or throw up ideas whilst our minds are released from inhibitions during sleep. Dreams may be used to obtain original images and ideas for stories, poems and pictures. However, perhaps the most

important use of dreams is to give us insight into the subconscious pool of our past conditioning. To throw up clues that help us better understand the construction of our personalities. The unique living result of our personal histories.

The images in dreams are often masks for feelings not normally available in our present time. These repressed feelings may derive from early memories which do not have their own clear imagery. Such feelings without form will be ‘dressed’ by the mind in images plausible to or palatable to the intellect.

As there are no universal interpretations for the meaning of dream symbols, trying to analyse dreams in this way is often a hit or miss affair unless you gain a clear understanding of your own symbols.

RATIONALITY - reason or logic

Reason is the ordered use of language to ascertain the truth or validity of statements. It has gained tremendous prestige in the last few centuries through the immense achievements of science. This prestige has led to an unhealthy domination of thinking. We try to apply reason to areas of intuition or emotion in which it is inappropriate and at best crude and heavy handed. The appearance of reason can confer authority to any common rhetoric - the politician who will dress up his emotional appeal in the reasonable appearance of rational analysis.

But rationality is basically very straightforward. It uses simple principles which we all find intuitively self-evident. Accepting these we may then derive valid implications from combinations of simple statements. For example: If apples and bananas cost the same price per pound, then 3 pounds of apples and a pound of grapes will be the same price as 3 pounds of bananas and a pound of grapes. And - If it is true that all women are mortal, and if Maggie Thatcher is a woman, then we may deduce it is true that Maggie Thatcher is mortal. In fact this has proved to be the case.

Put in this simple form, logic seems ridiculously obvious but that just shows how natural an ability is rationality. The trouble is that in the real world the examples we come across are much more complex than the simple forms I have just given, and this leads to all kinds of error. The more we can be aware of these areas of error, the more we can allow our natural reasoning ability to take its course unimpeded.

The errors that creep in to complex chains of reasoning are easier to spot if the reasoning is written down and examined in written form by a range of people to whom the reasoning is relevant. Below is a list of 15 sources of thinking error. In the exercise section each of these heading is discussed in more detail and can be used as a checklist to examine an example of reasoning.

Key checklist of thinking errors

1. Definition of key words/ terms used

2. Equivocation

3. Incorrect basic ideas

4. Cause (or antecedent)

5. Attribute (or association)

6. Generalisation

7. Classification

8. Emotion

9. Personal experience

10. Context

11. Viewpoint

12. Logical arrogance

13. False validity

14. Analogy

Some of these points will overlap and merge into each other.

Some Fundamental Assumptions of Rationality

1. Frequent repetitions of similar sets of events give us good reason to expect a similar result in the future. We continually act with faith in this Principle of Induction. We buy a chair in a shop without testing it because various visual clues convince us from past experience that it is in fact a sound chair. However, we must remember exceptions are possible. Some degree of doubt should be retained.

2. What follows from a true premise is true. If it is true that stars are in the sky, then as we look up at the blue sky we deduce the existence of stars we cannot see, or, if it is known that Y is true if X is true and if X is indeed found to be true, it follows that Y is true. This is known as the self-evident principle of deduction.

3. The universe is consistent. No fact in one place will contradict a fact in another place. Technically this is now challenged in relation to distant parts of the universe, blackholes etc but for our more everyday purposes the principle is useful.

4. New knowledge can only be understood in terms of things of which we already have had experience. The less things are capable of attachment to things we already understand the less they are capable of being understood.

EMOTION

Emotions seem to be chemical excretions, which effect how we feel and are triggered by sensory /mental events. There is also a physiological expression associated with many emotional states - crying, shaking, laughing and so on. So in a way emotions are not entirely situated in the mind and could be seen as an fourth aspect of human ability.

Our fundamental requirement is to survive and thrive. Firstly as individuals and secondly as a species. But what is the psychic channel of this organismic drive? The most credible theory is that it is our desire for pleasure. Our sense input and thinking seem to stimulate an area of the brain that gives us a positive feeling of pleasure. This drive is modified firstly by our thinking which budgets our resources to ensure longer term security - we think ahead, and secondly by our perception of pain.

Pain is our warning of survival threat. In psychic terms pain is incurred whenever there is a threat to the integrity or power of our organism. As well as damage to our body this can take psychic forms such as loss, fright, frustration, boredom or ridicule. The perception of pain causes the body/mind to protect itself in various ways and then later when the threat is

no longer present and we are feeling safe, it will heal the hurt. A process accompanied by emotional expressions especially when the hurt was psychic.

These releases of emotion or discharge processes include animated talking, laughing, yawning, trembling, and possibly things such as sighing, scratching, retching and stretching. It seems some of these are essential for a complete healing process to occur. Certain conditions of safety need to be present for these processes to occur. The main requirement is usually the uncritical caring attention of another human.

If these resolving processes cannot occur after a painful experience there is a shut down, repression or rigidity in the memory areas associated with the hurt. Accumulating or catastrophic pain which is unresolved causes serious general interference with the functions of the body/mind. The symptoms of this disturbance vary from severe depression or chronic feelings of inferiority to irrational dislikes or erratic memory recall, from 'nerves' and 'tension' to disease or psychosis. Fortunately these blocks may be cleared by simple techniques at a later date. But it takes a lot of time. It seems that a large part of human potential is probably occluded in this way.

> “What is repressed exercises a continuous straining in the direction of consciousness, so that the balance has to be kept by steady counter pressure” Sigmund Freud, Collected Papers Vol 4 1959.

The resolving processes are commonly confused with the hurt itself. A sympathetic parent will often distract a child from hir tears, thinking that all is well if tears can be stopped by distraction or other means. But tears are not the hurt. Quite the opposite, tears are a visible sign of the resolution of the hurt. The value of quiet listening and appreciative attention is often not realised and instead the healing process is interrupted.

A high premium is put on our children displaying self-control. Emotional outbursts are not encouraged as their cathartic healing function is widely misunderstood. A pain is stored as part of the whole sensory experience in which it occurred. When something happens to us that is similar to the experience in which the pain occurred it will bring up those feelings by association and we will experience a change of mood.

We frequently experience irrational feeling, the cause of which, we look for in the events around us. But, often as not, the cause of the feeling is an upset that happened years ago that has simply been triggered by an association in our present time experience. By this, process a patently innocent event can resurrect a strong feeling, that looks quite irrational when applied to the current situation.

To make things more confusing several feelings can arise at the same time to produce a gamut of bad feeling. The thing to remember is that there is always a concrete origin in past events for an unhappy feeling in the present.

This process of hailing events from that past happens subconsciously as part of the continually association of past experience with present sensations. When people see a sad movie they cry because it brings up sympathetic feelings in themselves. Many people will ‘pull themselves together’ and inhibit crying because they think it is immature to cry in a situation which in reality is ‘just a film’. What they do not realise is that they are actually crying about a past incident that really was upsetting, the memory of which has been repressed.

It is easy to see how people equate crying with weakness (You cry baby!), trembling and raging with lack of control (Pull yourself together!), yawing with insufficient sleep and so on. These conditioned responses to emotional expression, particularly while we are young, have seriously interfered with our capacity to heal from past trauma.

What do I mean by a survival threat that causes psychic pain? Any denial of our potential is a threat to our integrity. Helplessness on any level is the most common and hurtful experience. It conditions us to be dependent and feel powerless. Any of our infant needs which were repeatedly denied will be felt, when evoked by later events, as an emotional upset that reduces aspects of our ability live well. These unmet infant needs that have later repercussions on our mental well-being include: the need to be touched; to be allowed to sleep in peace; to nurse on demand; to be dry and fed properly; be appreciated; never to be left unattended; to be freshly stimulated but have a tranquil environment; to be consulted and informed; to be treated with respect and love; to be weaned from dependency with consideration.

Another key one is to receive uncritical attention when hurt and be allowed emotional expression. This is key because it leads to the later difficulties we have healing from other hurts.

Denial of our power is of course more widespread than the infant realm. It extends through the class structure, in which a majority of people are conditioned to deeply interiorise a feeling of being inferior to a superior ruling minority. All the pervasive and often subtle put-downs that are the building blocks of oppression are profoundly hurtful and leave most of us struggling in the mould of second class humans.

Summary

Emotional release is an automatic physiological reflex that is triggered when the right conditions exist. You can create these conditions and allow it to occur. Some attention must be given to the hurt but some must also be put onto present time safety. The present time ‘safety’ is usually provided by the presence of caring human who will not interrupt the process for an agreed amount of time.

With sufficient space needed emotional processes will take place, hurts will heal, and mental limitations will vanish or wither away. Body /mind functioning in areas associated with the hurt will improve, tensions reduce and thinking becomes sharper.

As little children we have all internalised an immense amount of hurts and as oppressed adults we get more. These hurts interfere with our body and mind functioning leading to disease, irrational and anti-social behaviours and a shut down of flexible thinking.

Introduction to MOVING

Having obtained experience through our senses and analysed it with our mind there is nothing left for us to do but act on the information received. Action is produced by a complex system of contracting muscles pulling on a flexibly jointed frame of 208 living bones. The action produced can vary from breathing and blinking to singing and eating.

Eating and breathing; are the key activities which supply the food-fuel and oxygen necessary for muscle contraction. These raw materials are transported to muscles by the disc shaped cells of the blood. This fluid is circulated by a centrally located pump which has acquired a mythic status. Just six weeks after conception the foetal heart starts to beat, before there is even blood or a circulatory system.

The gut, lung and heart are themselves, operated by muscles. The gut and heart will benefit from exercises but are otherwise automatic functions which cannot be improved or further experienced by practice, except by raising the quality of the raw materials. Lungs are similarly automatically regulated but can also be under more conscious control and awareness. The movements involved being larger and more external. The eternal cyclic and rhythmic operation of the lungs make them central to our focus on muscle borne activity.

This section opens with a variety of breathing exercises and follows these with a sequence of elemental movements from resting and lying down through sitting, standing, walking to running and jumping. This sequence covers the main mobility functions of the human animal. There are two more areas of muscle action which give us our power over other animals and make us potentially god-like. These are the dexterity of our hands and the expressive range of our voice.

General Principles of Practice

Before going on to the myriad of muscular actions and skills here is a short guide to general principles of practice.

1. The character of the movement must either be demonstrated for imitation as slowly, and as often as required, or the limbs must be physically guided to the pattern of the act. In this way the general shape of the movement is acquired.

2. Verbal instruction is of little use at fundamentals levels. Where the elements of an act are known and labelled then verbal use of this 'skill vocabulary' may act as sufficient cue.

3. If a complex act needs to be broken down into parts to be learnt, the meaning and place of each part in the whole should be well understood.

4. Once the movement has been roughed out by the learner the only way to achieve improvement is practice, practice, practice.

5. At the roughing out stage care should be taken that basic errors of good posture are avoided.

6. Corrections at all stages should consist of relaxed caring physical guidance and demonstration rather that verbal fault finding.

7. As the action is practiced a few core features should be kept in mind at any one time moving on to other features only when these have been successfully assimilated.

8. Constant feedback of some kind is absolutely essential. It may be by the reflections in a mirror or through verbal encouragement and correction of errors by a coach.

Expressing Being - posture

Although action can have an ideal of the efficient and safe use of the skeletal frame and its muscular pistons it also carries social meanings. An efficient balance of the spine with the use of minimal muscular tension is also a posture of pride and self assurance. A posture that also has the unfortunate association of being 'regal' and belonging to the 'upper' classes.

> “The shoulder, in rising, is not called upon to teach us whether the source of the heat or vehemence which mark it, arise from love or hate. This specification does not lie within its province; it belongs entirely to the face, which is to the shoulder, what the barometer is to the thermometer. And it is thus that the shoulder and face enter into harmonious relations to complete the passional sense which they have to determine mutually and by distinct paths... The shoulder of every man who is moved, rises sensibly, his will playing no part in the ascension; the successive developments of this involuntary act are in absolute proportion to the passional intensity whose numeric measure they form; the shoulder, therefore, may be fitly called the Thermometer of Passion and Sensibility.” Francoise Delsarte quoted by Ted Shawn in Every Little Movement
>
> “The physical expression of a gestural mood is, however, not always the most appropriate for the situation... Anyone not thrusting up his shoulders when startled but gathering his strength in his lower belly must certainly have practised in some way.” Sato Tsuji quoted by KG von Durkheim 1960.

People in cities often suffer with tense shoulders and neck because their gestural reaction to urban stress has become chronic and 'stuck' in the mode. To make matters worse this unresponsive fixed expression is socially contagious.

Each part of the body is capable of some expression of internal feelings. The body as a whole is communicating meaning all the time. Activities are dealt with here as functional processes but it should be remembered they are also expressive states and sometimes we can choose to trade efficiency for expression.

BREATHING

Breathing is the cyclical and continuous pumping action by which air is brought into the body. Air is sucked into the lungs so that oxygen in the air may be absorbed into the blood and carbon dioxide and water exhausted. The oxygen is necessary for the combustion of carbohydrate foods which produce our energy. The energy fuels all our body processes. As a whole this biochemical activity is known as our metabolism.

The lungs are composed of an elastic spongelike structure of tiny and delicate compartments called alveoli. It is in the thin walls of these minute chambers that oxygen is absorbed and the waste products carbon dioxide and water vapour are released from the blood. This process is called respiration. The lungs themselves are not muscular and play a passive role in the process of breathing.

The rib cage protects and supports the lungs. It is the muscles between the ribs (the intercostal muscles) and a sheet of muscle that forms an upward curving floor to the rib cage (the diaphragm) that motor the breathing process. To suck air into the lungs the diaphragm contracts, moving down in the trunk like a piston. Simultaneously the ribs expand out and up to increase the girth of the rib-case.

In the first stage of exhalation the diaphragm and intercostal muscles relax; the elasticity of the inter-rib cartilage and lung tissue return the lungs to their original volume and the air is gently expelled. Further expulsion of air may be achieved by use of the abdominal muscles.

The capacity of the human lungs is about 6 to 7 litres. Only about 1/5 of this is exchanged in relaxed exhalation. This is called the tidal air which comes and goes steadily. With forced exhalation up to 4/5 of the lung capacity may be used. This is known as the complemental air and the remaining litre or so is known as residual air.

At rest an average adult will take 10 to 14 breaths per minute. with light activity this goes up to 17 to 20. People practised in sitting meditation claim to be able to manage as little as three. In each breath about a half a litre of air reaches the alveoli and takes part in respiration. The rate of breathing is automatically regulated and related to the pulse rate.

Breathing practise does not serve to increase skill as much as remove obstacles to efficient breathing. Breathing practises also seem to be used for their effect in calming the psyche and as a meditative metaphor.

The initial instruction in breathing exercises is often to 'let it happen'. Don't 'take' a breath. Deep breathing is a natural function; all we have to do is to relax enough to let it happen.

> “The first thing that has to be learned is to let breathing happen. This is possible only to the extent that the person is able to cease directing the breath from his I. Just how difficult this is becomes clear when he first observes his breathing, for then the effect of the fixing I, interrupting the natural rhythm, becomes immediately apparent. Breathing falters and the beginner frequently has the impression that he is no longer capable of breathing properly, and that he is short of breath. It takes a long time before such a person, even one who breathes more or less rightly, is able to breath consciously in the right way. To learn this is a basic exercise - exercitum - which is needed by both the sound and the unsound... Again and again he resists exhalation half-way and half intentionally he assists the inflowing breath.” K.G. von Durkheim Hara: the centre of personality, 1960

Another school of thought would say that poor breathing is an effect of generally faulty skeletal alignment. The way to improve breathing is only through a general improvement of coordination. Defects which are often attributed to people who have learnt 'deep breathing' include: undue depression of the larynx; stiffening muscles in the throat, vocal organs and neck; undue lifting and depression of the front part of the chest and insufficient use of the back.

Yoga breathing exercises are somewhat different in that they do not apply to normal breathing. As in other yoga practice they put a controlled strain or stretch onto the breathing faculties which stimulates them and. their allied functions. Abdominal breathing will massage the viscera which aids peristalsis and invigorates the gut. This serves to flush out poisons, make the organs tougher and more flexible and have beneficial psychic effects.

Perhaps the best breathing exercises are those which are done as a part of movement sequences. The conscious mind focuses on the movement and breathing is just allowed to happen in response.

The diaphragm the main breathing muscle, is closely connected to parts of the nervous system in the solar plexus. The old prescription to ‘take three deep breaths’ in times of stress has a basis in our physiology. Achieving smooth deep breathing does seem to have some calming effect on the 'nerves'. Massage of the solar plexus seems to happen especially during forced exhalation.

In addition to the calming effect energy seems to be released. This energising effect is imaginatively described in many oriental practices. The breathing is seen to be a pump for an 'intrinsic energy' which moves in channels through the body. Probably the same channels as those identified in acupuncture practice.

The intrinsic energy or 'Chi' rises from the base of the spine up the spinal column. It is pumped up these channels by deliberate abdominal breathing in a relaxed mood of concentration with the exclusion of everyday thoughts. The 'chi' is said to be stored in seven centres as it rises through the body (the perineum, sex organs, navel, heart, throat, pineal gland & brain). When this energy is accumulated it is claimed to power some of the more extraordinary practices of the

Eastern martial arts. It is difficult to assess whether this is due to the physical process of breathing or a mental image that is evoked.

The exercises provided fall into roughly three types:

1. Improvement of everyday breathing by identifying and avoiding bad habits of body coordination.

2. Strengthening of the breathing apparatus by synthetic methods of breathing.

3. Breathing as a cosmic metaphor and rhythm that helps us get in touch with present time realities.

> “Nature has provided two familiar muscle responses to help maintain a long spine in breathing. They are automatic, which makes us feel they are unimportant. But anyone who starts trying them out begins to find their true value. One response is called the yawn, the other is called the sigh... The yawn acts as a muscle barometer for the breath. Without being aware of it you can shorten your breathing over a period. This can happen in either a rapid or prolonged build-up of tension. It can be occasioned by physical or emotional impulses or both. This tension creates a desire within the muscular system to stop holding the structure rigid. Result... you yawn or sigh.” Barbara Clark Lets Enjoy Sitting, Standing, Walking 1963.

SLEEPING

Sleep, rest and relaxation are all kinds of non-action. Non-action is as important as action. Sleep is another area which does not fit easily into the tripartite classification of STA. The mental side of sleep, dreaming, is covered in the thinking section. A good perspective to take on the importance of sleep is the thought that if we have lived for 75 years, then 25 of those are likely to be spent in bed.

There are two types of sleep that alternate four or five times during the night. The basic dreamless sleep, during which the body tissue is restored, is divided by shorter periods of Paradoxical or dream sleep. During paradoxical sleep nerve connections are strengthened and nerve tissue restored.

There are four conditions which go to make good quality sleep:

1. Pre-sleep period - mental and physical repose.

2. Environmental conditions - warmth and ventilation.

3. Correct support - bed, pillow and posture.

4. Waking up.

Pre-sleep prescriptions: Because we know so little about sleep and because it is, by and large, a non-experience, we tend to wish that it would look after itself. In fact, like conscious activities, it is able to be done well or not. The most effective general prescription for sound sleep is to allow at least half an hour to prepare yourself.

RELAXING

Informal relaxation does not mean that any permanent improvement of posture is necessarily achieved. However formal relaxation does allow the tension patterns that interfere with our body's proper functioning to subside for a while. This gives our body essential relief from the restrictions imposed by stress.

Tension arises when gestural expression becomes rigidly or chronically held. For instance: a person who once had a good reason to be frightened of the world may habitually have tight muscles around the upper torso/neck with a tendency to have raised shoulders. This tension becomes chronic even though the original cause of the fear is no longer present. As youngsters all of us have had experiences which have left a pattern of tensions in our musculature. Such muscle tensions can interfere with breathing and other basic functions, including the constriction of blood vessels and nerve routes. Apart from the shoulders other common areas of tension are in the neck, stomach and back.

Neck tension often causes headaches by restricting flows to the brain. Stomach tension results in stomach upsets or intestinal malfunctions. Back tension gives us crippling pain and can lead to slipped discs and Sciatica. Temporary relief is afforded by relaxation techniques. Permanent relief may require complementary therapeutic work.

Relaxation is also the first step in achieving waking sleep in which the consciousness may get in touch with the creative powers of the unconscious.

Fruitful relaxation is not slumping into an armchair. It is creative inaction similar to meditation. Systematic relaxation allows us to be more in tune with our intuition. It allows us to see the less obvious possibilities by finding a neutral space outside of our routine program. The highest forms of relaxation/ meditation practice achieve an inner poise that allows us to observe some of the emotions and fantasies in which we are usually immersed.

Apart from the exercises described here baths are very good for relaxation. Turkish, Russian, Sauna and Aerotone are a worthwhile weekly treat if they are available in your vicinity.

SITTING

Sitting is a postural compromise between standing up and lying down. Sitting is often a perfect position for creative (in)activity.

The requirements of keeping the trunk erect whilst taking weight off the legs and feet help keep us alert for long periods without getting tired. You can sit behind a table to work or you can just sit. You can sit up on a chair or sit down on the floor.

If you sit most of the day it is worth spending some time getting it right. If you don't often sit then is nice to enjoy doing it well when you have the opportunity.

STANDING

Standing is a complex task of subtle muscular co-ordination. The central structural member is the spine which is made up of 33 individual vertebra. Ideally it is the deep muscles lying close to the spine which lend us the most efficient support.

However, bad posture stemming the expression of chronic emotional experience, tends to bring other muscles into play as the skeletal structure becomes more eccentric. Apart from inefficiency this can lead to all sort of health problems.

It was Iyengar's long description of standing yoga or Tadasana that first gave me the idea of the Sense Think Act collection.

WALKING

Walking includes much of the postural principles mentioned in the last section on standing and in the previous section on co-ordination. In walking the spinal balance becomes complicated by a dynamic weight exchange from one leg to the other.

The weight of the body is supported first through one leg and then the other. The rhythmic use of our muscular symmetry often makes walking for long periods easier than standing for a similar time. However, as with all posture, walking is not just a matter of mechanical efficiency but a whole mode of communication and source of rhythm. When we walk we express our deepest feelings about ourselves and how we would like others to see us.

When out walking we are ensured a continual change of stimulation. We are aware of the interrelated detail of the world and we are able to interact with our surroundings.

Walking is our most ancient and basic means of travel.

RUNNING

The difference between running and walking is that, in running, both feet leave the ground. It is really a series of small leaps. The leaps can be made so efficient, the exchange of weight so smooth and rhythmic that a healthy fit and physically average person can run for miles without undue strain.

Jogging or long distance running allows us to experience the limits of our metabolism. We can run as fast as our circulation can bring sufficient oxygen and glucose to the muscles and carry away waste materials. This intensification of our circulation flushes out our system in a way few other physical activities can.

It is exhilarating to realise how fast we cover distances when we have learnt to run properly. The sensation itself, if we are not struggling through the pain barriers of competition or personal best times, can be like floating along whilst our feet beat time. It can be encouraging to run with other people and some people may find it useful or exciting to compete. However, especially when beginning, it is very important to find your own pace and progress gradually.

Some claim that a daily running schedule burns off negative 'energies', cleansing the psyche as well as invigorating the body.

JUMPING

We jump for joy. The exhilaration of leaving the ground under our own power and flying through the air, however short an experience it is, cannot be equalled by any other unaided muscular action, It is an expression of tremendous vigour and energy.

HANDLING

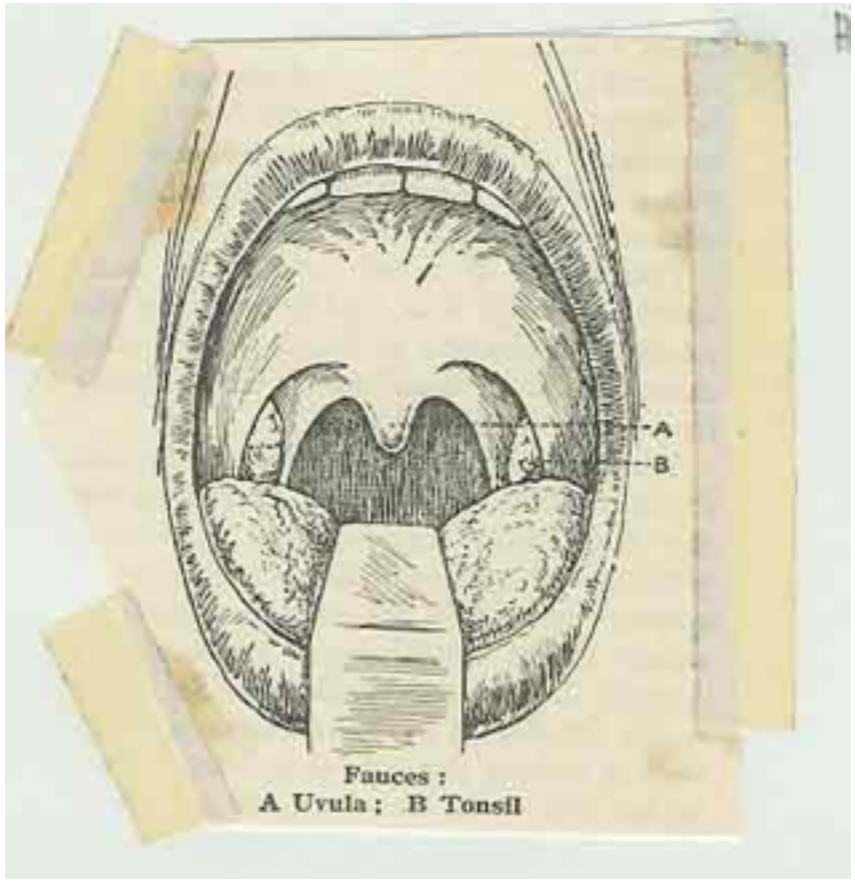
The dexterity of the hands produces tools, which make machines, which produce the wealth of all the things made by humans. Things that now provide every imaginable aid to the extension of our basic functions. The abstracted development of dexterity does not seem to be a common element in physical education programmes. However it is the hand which provides the most important synthesis of our sensing and thinking in the production of things. Improvement of dexterity is usually an integral part of some specific craft only a few of which seem to have separate hand exercises.

As with other muscle uses hands produce communication as well as things. Here is a selection of hand gestures with their British meanings.

VOCALISING

Speech is both the most vivid and precise method of communication available to the unaided human. The part that the voice plays in speech is to produce the myriad component sounds that make up vocal quality. It is capable of great range and complexity. It is the sound that a human infant will most prefer to listen too. It is the key tool of our socialisation.

The result depends not only on the vocal cords but also the lungs, tongue, mouth cavity, skull, lips, etc. Each area must be under control and yet elastic and not rigid with muscle tension.



EATING

There is an old controversy about how we should physically eat our food. There are old customs that it is good to chew each mouth 17 times or whatever. These advices seem to have a basis in the fact that digestion is aided if the food is fully mixed with saliva before swallowing. Saliva contains a digestive enzyme called Ptyalin. Chewing also means we eat at a steady pace and are so, perhaps, able to avoid the indigestion which occurs when food is gulped down in lumps.

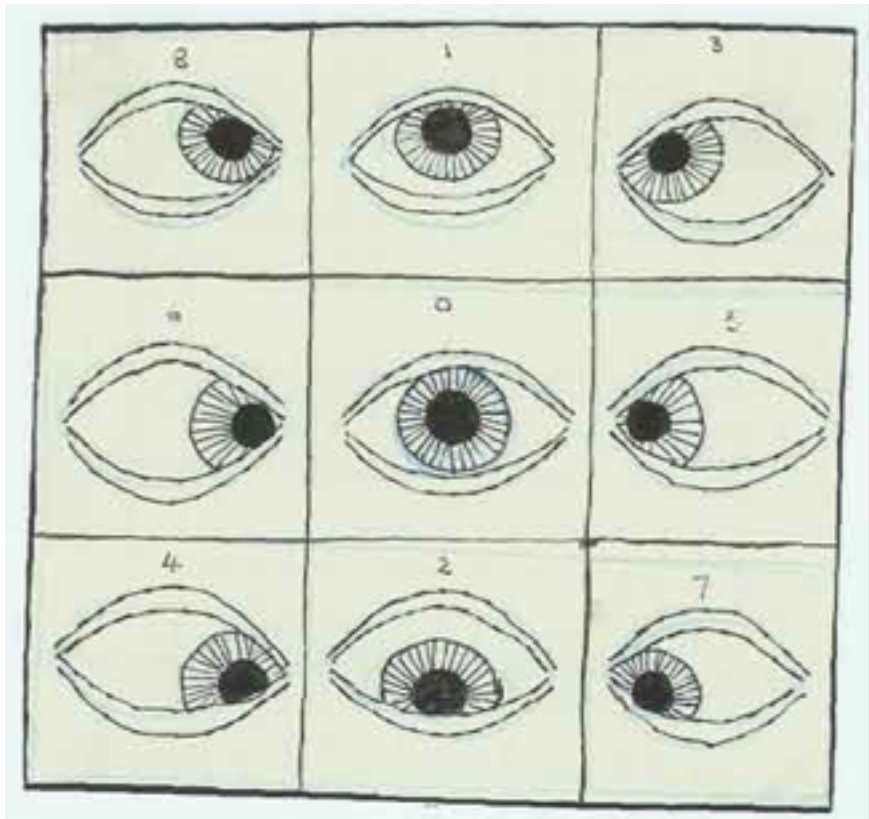
A good case against the careful chewing approach is made by a Persian Dervish related by G. Gurdjieff in his classic: 'Meeting with Remarkable Men'.

> “By chewing your food so carefully you reduce the work of your stomach... At your age it is better not to chew at all... We eat chiefly to gratify our taste and obtain the accustomed sensation of pressure which the stomach experiences when it contains this particular quantity of food. In the walls of the stomach there branch out what-are-called wandering nerves which, beginning to function when there is not a certain pressure, give rise to the sensation we cal1 hunger. Thus, we have different hungers: a so-called bodily or physical hunger and, if it may be so expressed, a nervous or hunger, and psychic hunger.”

There are no exercises on eating at present.

SEEING EXERCISES

exercise: Eyeball Muscles It is claimed that holding the eye positions shown for a few seconds (be precise and increase time gradually to avoid strain} each day will restore a true rotundity to the eyeball. The exercise will also massage the eyeball. The order indicated in the diagram may be followed or you may choose your own. However, be methodical. Movements between the positions should be slow and steady, the eye focusing naturally. Do not neglect to blink regularly.



exercise: Tense Lens Muscles The other muscular operation of the eye is the focusing of the lense inside the eyeball. People often tire their eyes by using them for long periods at a fixed focal length. If this tends to happen in your occupation, take one minute to smoothly shift your focus from near to far objects. Repeat this many times. Try and relax your eyes so that everything goes out of focus, then after a few seconds snap back into focus on something within range.

exercise: Focused Observation Choose a small familiar object from your domestic surroundings that possesses detail. A matchbox, clock, radio, ornament, coin, key, postcard, brush, shoe, book, plant, identity card, mug, cushion, lamp, pencil, painting, cassette, toothpaste, all will do. Begin to observe it very closely. The exercise should last a definite time. Ten minutes is a good timespan. If you cannot keep up an intense level of concentration for this long, you will find that drawing the object is a good aid. Don't worry if you can't 'draw a likeness'. Make verbal notes of every new observation you don't draw, This is an important ritual of consolidation. A new object every day will give you 360 degrees of extra texture in a year. By this time your sense will reach a magical level of efficiency.

exercise: Estimating Dimensions Every time you go into a new room estimate the dimensions by eye. Note these down and then measure them with a pocket tape. How many rooms do you have to enter before you are accurate within one foot?

Spend five minutes going around your home estimating the dimensions of things and then checking them with a pocket tape. Continue daily for ten days, rest and assess your improvement. Continue in periods of five or ten days until you can guess dimensions including diameters within one centimetre.

Cut various random lengths from a ball of string. Each length is let fall On a separate part of the floor. Guess the lengths and check against ruler. Take five minutes and continue daily for ten days or until required accuracy is attained. Pre-set goal.

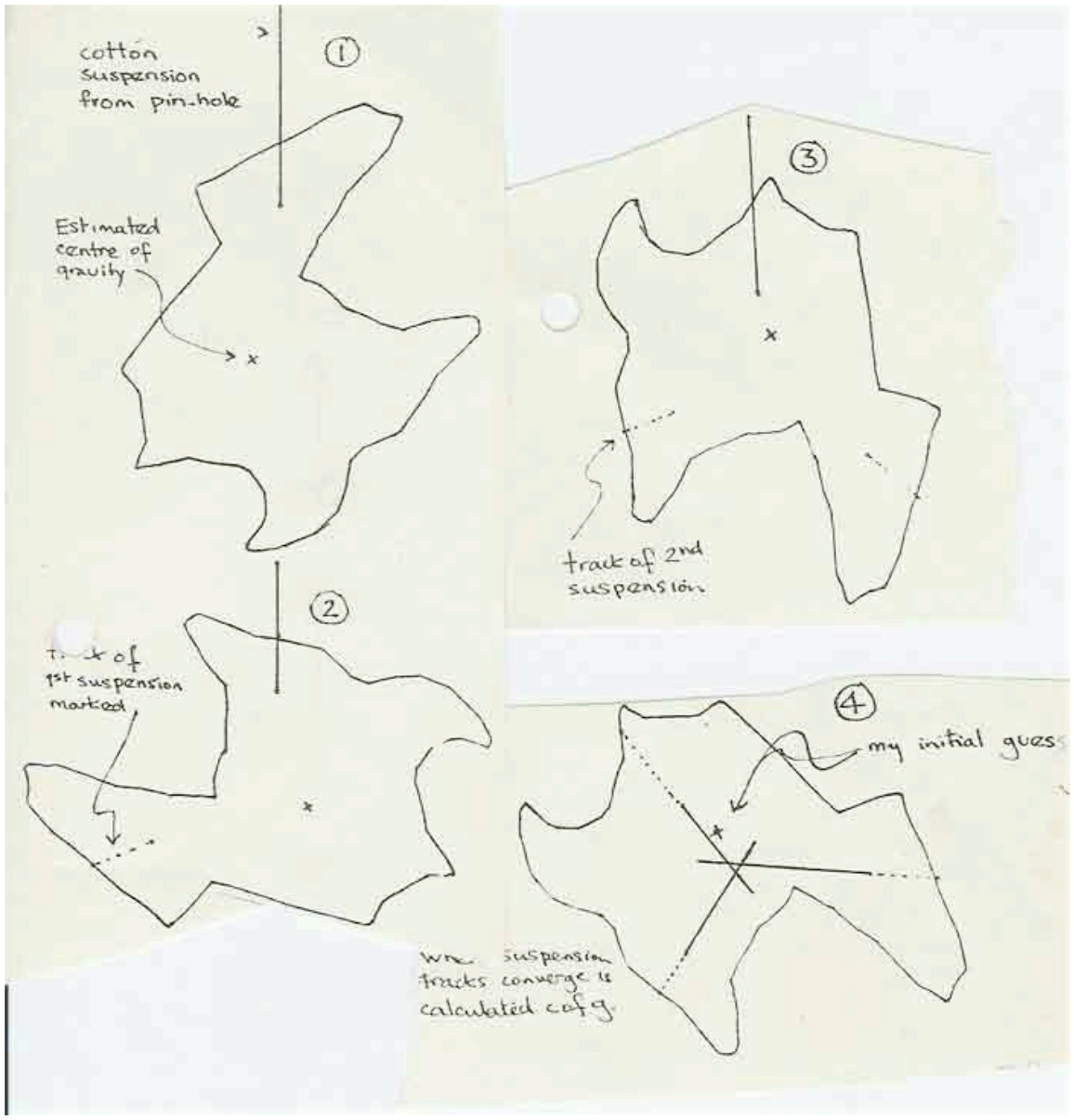
exercise: Colour Composition Collect objects and scraps of uniform colour. Cut areas from coloured packaging, materials and plastic. Collect leaves/wood/flowers until you have filled a small cardboard box. Then arrange the pieces on a long wall, in a rainbow sequence, so that one colour will flow into the next. The scraps are then used to make a collage or picture for which there are no formal rules.

exercise: Using Peripheral Vision

a. A group of people run in random patterns within a room. Play Dodgem. Use peripheral vision to avoid collisions. Walking quickly through a crowded street/market etc. we use the same faculty.

b. Stand staring straight ahead. A colleague introduces objects into your cone of vision from behind. Say when you first see the object and then try to identify it without moving you eyeballs. Start with large brightly coloured geometric objects and move on to smaller more camouflaged objects. Assess each other's progress.

exercise: Estimating Centre of Gravity



HEARING EXERCISES

exercise: Judging Direction of Sounds You need to be blindfolded; Sit In a chair in the middle of a large room. Block one ear with a hand or an, earplug. Now get a friend to move about quietly making sharp sounds in different parts of the room. Repeat the experiment with both ears open. Which directions are the hardest to be sure of? Make a chart and check the response several times in each position.

If your sense of direction with two ears open is not excellent repeat this as an exercise at regular intervals.

exercise: Ambient Sound Meditation

a. How many sounds can you hear? Count them. Distinguish for each sound - direction and cause.... differences in tone and strength... rhythmic qualities... groupings. For this exercise and each of the following developments it is suggested that you repeat it for ten days (with rest) and then note any improvements. It is essential to work gradually and methodically, or little useful progress will be achieved.

b. Select one of the most obvious sounds and list everything you can imaginably say about it. In repeating select a new sound.

c. Detect one of the faintest sounds you are hearing. List everything you can say about it.

d. Select a pleasant sound you are hearing. Note every reason why you feel it is pleasant.

di.

exercise: Record Self Audio record yourself doing some activity. (a) be conscious of the recording microphone. Or (b) forget the recorder is on (put the recording device in a drawer). Play the recording back to yourself whilst you are doing some other activity. Examples:

i. Record yourself having breakfast. Playback whilst watching .'Match of the Day'

ii. Record yourself washing-up Playback whilst having a bath.

iii: Record having a bath. Playback whilst waiting for a bus.

Don't take an excessive interest in listening. Playback unobtrusively. Keep one of the early recordings that you like; Repeat the exercise at least twice a week alternating a & b. After 6 months compare a recording you like with an earlier recording.

exercise: Mimicry In front of a television, radio and/or tape deck, tune in to something of interest and practice mimicking whatever catches your fancy. Concentrate on phrases that seem to epitomise the character of that particular sound to which you are listening. Phrases that recur in the course of the programme. Repeat these over and over to yourself making minute changes until you are able to reproduce the sound with uncanny authenticity. More particularly... purchase a record of common bird sounds and learn to mimic some of them. In this way not only will you recognise birds by their sounds but you will also be able to lend your neck of the urban wasteland a quaint pastoral flavour.

exercise: Focusing on One Sound Amongst Many Collect together three radios and a clock. Put them all on at equal volume and different programmes. Shut eyes and listen attentively to one programme only for a timed one minute. Switch attention to another programme for one minute. Every minute switch your attention. It doesn't matter how interested you become (within reason) At the end of the time... switch.

If you find this too difficult move the radios apart and sit facing the one you are paying attention to. If you find this too easy add more radios.

Do this from six to ten minutes daily for ten days with rest.

exercise: Musical Ear Training A Basic Programme

1. We must first learn to 'perceptually isolate' (identify) a note without being confused by its overtones (harmonics). To make the predominant pitch of a musical note into a concrete (muscular) experience for the brain to handle, learn to imitate notes played on a variety of common instruments. The memory and discernment of different notes is reinforced by their vocal expression. The variety of instruments ensures that the pitch of a note is not confused with other parts of the total harmonic package (the 'overtones' which give different tonal qualities to each type of instrument).

2. The second job of appreciation is then to be able to clearly perceive the pitch of a musical sound and compare it with another to judge which is the higher. This should be gradually continued until, the 12 equal divisions of the octave (i.e. semi-tones) are clearly distinguishable. Two notes are played one after the other. Sing them and identify which is higher.

3. The next step is to distinguish the interval between notes. Two notes are played one after the other. Sing them and name the interval. (i.e. how many notes apart are they?) Start with the easier intervals... second and octave, then third and fifth, then fourth, sixth and seventh. Note consonant intervals, and the intervals that produce dissonance. It is conventionally useful at this point to learn to name notes by their code letters and to know their position on the five line stave.

4. Then we come on to groups of notes.

    a. Get someone to play a few notes simultaneously. How many notes has it? Learn to distinguish between two and three note chords (above three notes becomes difficult)

    b. A chord is followed by its lowest note. Identify the other notes by singing or naming them.

    c. Distinguish between chord inversions. Root position, first inversion, and second inversion of the triad a common major chord. ie.1st, 2nd, 3rd, 5th 1st tonic; 5th 1st tonic 3rd.

    d. Differentiate between major and minor triads of a common chord. see diagram

5. Listen carefully to some simple short melody, played on a piano or organ. Then try to reconstruct the melody from memory. At first you will only remember, perhaps, a few notes. Don't be discouraged, build up from whatever scrap: you can remember. When you are able to reconstruct simple melodies you may wish to increase, step by step, thE complexity of your text.

NOTE: For those who do not possess or have access to a piano or similar instrument. Take an audio recorder to the nearest available piano and record relationships as indicated in the text above leave a space after each example and then after fifteen or twenty seconds say what the relationship is in words. Do not memorise what you are doing. later playback and see if you can guess correct answer. The recording should be quite long if it is to be used more than once as it will be memorised very quickly.

exercise: Social Listening There is a psycho-social aspect to listening when it is another person that you are listening to. The manner in which we listen is an important component of human caring. I include an exercise on such social listening to emphasize this important connection. Creative listening can turn a dull anecdote into a fascinating story. It can bring out the beauty of someone who at first appearance seems dull and lifeless.

1. Decide that listening is going to be your main activity. Your argumentative faculties go into suspended animation. Full expression is what is important for the time being not the contention of rational truth.

2. Without making a cross-examination ask for the elaboration of every detail.

3. The person may insist on giving a short version of their story at first. Ask them to retell it eliciting full details and descriptions.

4. Listen with the motive that listening is good caring. Your own curiosity may interfere with the persons own direction. Make it clear that you are listening because you care about the person speaking rather than for any reasons relating solely to your own interest in the subject matter.

5. Prepare yourself beforehand to be ready for anything. Do not let yourself react in a shocked or judgemental manner by unexpected disclosures. This type of attentive listening is powerful, be prepared. Calm, alert and fearless attention is what is required... keep listening. Don't let your facial expression pass judgement.

6. Be prepared for laughing, crying, trembling, yawning, scratching. If they come up as a reflex response to what the person is talking about they should be encouraged as natural releases of pent up emotion. Be pleased at any such response and do not offer any oozing sympathy or other distraction.

7. Don't associate from what people say. Almost anything anybody says could remind you of some experience of your own... for the moment, keep it to yourself. Their story, however similar to your own experience it appears, is unique and special.

8. If someone is asking for suggestions get them to think for themselves. Only make suggestions, solve problems, think of improvements etc as a last resort.

9. Be receptive to the person... rather than the story.

TOUCHING EXERCISES

exercise: Two Point Discrimination Obtain a pair of blunt compasses. Open them so the points ; are about 3mm apart, with this gap you will probably be able to discriminate two points touching the skin of the fingertips, but if you now place the compasses on the chest you can only feel one poke. Adjust the gap until you can feel two separate points. Measure this gap. In this way a chart may be made of the sensitivity of the skin in different parts of the body.

Having made a chart, repeat this exercise for a minimum often days, with rest, and see if there is any increase of sensitivity. What conditions change the sensitivity of the skin to touch? This exercise is best done if the compasses are placed on the skin by a helper, and the subject keeps hir eyes closed.

exercise: Feeling Objects Spend 15-30 minutes exploring your room blindfolded. Be sure to make a good job of the blindfold, putting cotton wool pads over the eyelids if the contours of our face make it difficult to get a good seal. Identity objects by touch alone. Estimate the weight and dimension of various chosen objects, checking your guesses later. When an object you know well surprises you with the way it feels spends some time with it. Notice the exact position of fittings such as handles, relief design, indentations, holes, robustness, flexibility, articulation etc. Gradually increase the speed and confidence with which you can move about the room. Repeat this exercise with rest, until you can move around your room with as much ease as if you were not wearing a blindfold. After a break of a week or so move on to a new venue, eg. garden or bathroom.

exercise: Informational Massage We often associate touching each other as a demand for, or a move toward, having sex. This expectation can sometimes create a situation where the only time we get touched in just before sex, and sometimes we miss out on touching just for the pleasure of being touched and caressed. Re-establishing feelings of closeness, affection and trust can be done through massage that does not lead to sex.

Set aside some time to explore how where you like to touch and be touched.

With permission from a friend or partner, spend fifteen minutes stroking her or his body solely for your own pleasure. Ask the receiver to give feedback only if you cause discomfort or pain. Respect these limits.

Take a short break and then spend fifteen minutes touching your partner or friend for his or her pleasure. Ask for lots of feedback.

Is it easier for you to touch for your pleasure or the pleasure of another?

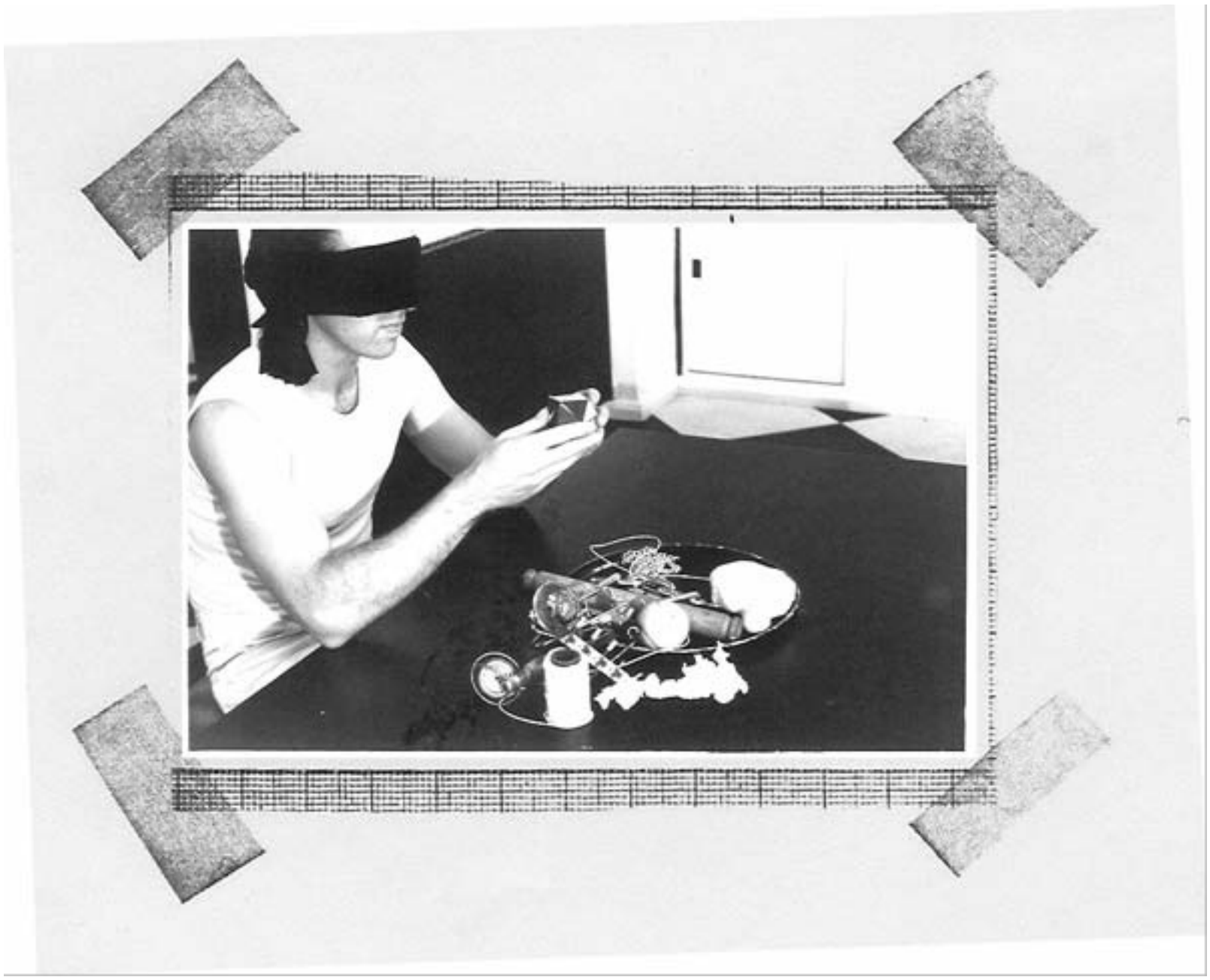
On another day, switch roles. Is it easier for you to give or receive?

exercise: Object Identification

1. Procure many similar sized objects covering a range of basic forms. Arrange these on a table top. Wearing a blindfold, examine these by touch alone and without handlingthem. Become readily conversant with their different shapes, textures and details.

2. Ask a friend to present you with several surprise objects, which you touch in the same way, without handling. You are' sitting comfortably before a table, wearing a blindfold. Try to determine what the articles are. Objects might include, a wax candle, a turnip, a parsnip, a potato, a piece of clay, a lightbulb, an empty box of matches (household size), a hand torch, etc.

Repeat for ten days, with rest, and then note changes in perception.



exercise: Weight Make or procure about a dozen wooden blocks, or tin or plastic boxes, of the same size. Now add hidden weights to the biocks in pairs, so they increase gradually in weight. Eg. 2 (empty) are Vz oz. approx., 2 are 1 oz., 2 are 1.5 oz., 2 are 2 oz., etc. The hidden weight may be plasticine, clay, lead etc. The weight should be marked inconspicuously on each block.

Now place the blocks, at random, on a table top. Blindfolded and using only one hand arrange the blocks into their similarly weighted pairs. Check and note results. The blocks are mixed up again, and rearranged using the other hand. Check and note results.

The blocks are mixed up again, and then re-arranged into their pairs using both hands alternately. Check and note results. Continue overten days, with rest. Note improvement.

The weight differences are then reduced eg. 1/2 oz, 3/4, 1, 1 1/4, 1 1/2 etc and perhaps in grammes. The exercise may also be usefully done with heavier weights eg. 1/2-20 kg.

exercise: Head & Face Massage Relax your hands. Massage and shake them out until they feel tingly. Rub them together... fronts, backs and between the fingers.

Begin by slapping your scalp all over with loose wrist and limp fingers. Then massage the scalp using the fingertips. Think of tension being released in the back of the neck; as it releases it lengthens. Fingertip massage around the hairline. Stroke the forehead. Place the palms of the hands overthe eyes and imagine the eyelids sinking back deep into their sockets as they relax.

Massage the nose... Pinch the bridge of the nose on each out-breath for five breaths. Rest head onto thumb-tips placed under the notches that you can feel in the inner top edge of the eye sockets. Massage gums.

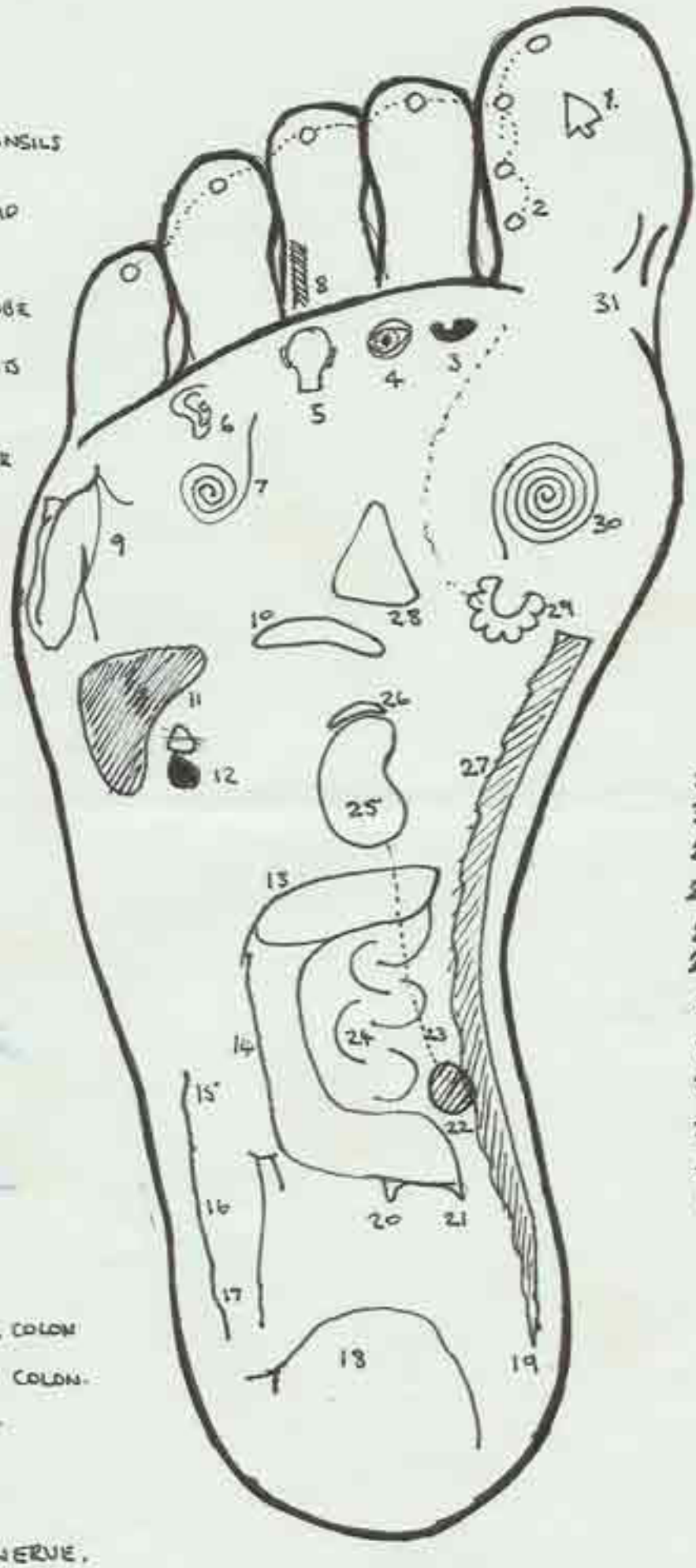
Brush the skin back from centre temple around to the ears. Continue this down the face pulling the skin back from the centre line in slow rhythmic waves. Rub the palms up and down the sides of the face in opposing directions stretching the skin diagonally. Finally make wild face stretching grimaces including tongue poking.

This is a guide to start you off. As you discover new things about your face or new things to do with your face include them in your routine. Such simple pleasure can seem unworthy of the effort of self discipline and not functional enough to be included in the daily rituals of self-care. Nevertheless repeat daily for ten days with rest and note the effect. (sequence above derived from Tai Do practice.)

exercise: Foot Massage Use your intuition and the following diagram. Concentration and sensitivity is essential.

REFLEXOLOGY // ZONE THERAPY.

1 PITUITARY
2 SINUSES
3 THROAT + TONSILS
4 EYES
5 BACK OF HEAD
6 EAR
7 LUNG
8 BRONCHIAL TUBE
9 SHOULDER + ARM JOINTS
10 PANCREAS
11 LIVER
12 GALL BLADDER



31. NECK.
30 STOMACH
29 THYROID
28 SOLAR PLEXUS
27 SPINAL VERTEBRAE
26 ADRENAL GLAND
25 KIDNEY
24 SMALL INTESTINE
23 URETER TUBE
22 BLADDER
21 ILEOCECAL
20 APPENDIX
19 COCCYX

13 TRANSVERSE COLON
14 ASCENDING COLON.
15 HIP JOINT
16 THIGH
17 KNEE
18. SCIATIC NERVE.

RIGHT FOOT. Note. LEFT FOOT SIMILAR EXCEPT Substitute Heart for LIVER

SMELLING & TASTING EXERCISES

exercise Explore 1 Explore your room/apartment/house/hut systematically for smells. Note down 50-l00 smells trying to describe each one in a couple of words. Can these smells be organised into groups using one of the classification systems mentioned in the introduction to smelling? This initial exploration will give you plenty of information on where to find smells for doing the following experiments. It will also give you a most extraordinary odour plan of your house.

exercise Explore 2 Your environment

A. Visit a derelict lot in which a variety of plants are growing. Make a systematic map of the predominant smells using graph paper. Attempt a classification.

B. Visit a store. Go systematically around all the counters smelling everything and taking notes. It might be a good idea to be surreptitious to avoid being escorted from the shop. Keep it up for at least 10 minutes. What smells were innate to particular and which were added?

exercise Personal associations and mental effects Sit with a particular smell within effective range. Meditate upon its associations and note them down. Then further involve yourself with the sensation and notice any psychic effects - does it elevate or depress you? Enter the smell and live in its world.

exercise Touch/taste discrimination

A. With a small spoon drop a dollop of syrup: onto the tongue. Is it the slippery feeling or the sweet taste that is first perceived?

B. Put a very little pepper onto the tongue. Pinch the nostrils. Is there a sensation separate from the irritation?

C. Experiment with other edibles. List them and note the components of the sensation that they give. Repeat these exercises for 10 days, with one or two days rest, then note any improvements.

exercise Sweetness Two glasses of water are sweetened equally. Ask a friend to add a measured and minute amount of Angasturas bitter to one glass. Now try and say which solution is changed by the addition of the bitter. The bitter may be increased until a difference in sweetness is perceived. Extra sweetness should be noticed before the solution tastes bitter.

Repeat every day for ten days excepting a day or two off. Note improvement.

exercise Flower Smell In spite of the extensive neglect by horticulturists in maintaining the fragrance of many cultivated flowers, there is still much pleasure to be had from the aromatic garden. Wallflowers, Cottage pinks, Flowering Tobacco, Sweet William, Alyssum, Heliotrope, Violet, Rose, Acacia, Lily of the Valley and Lavender are good examples.

Put half a dozen fragrant flowers on the table before you. Pick up each flower in turn, and savour its scent. Then with your eyes closed shuffle the blooms about, and then taking each one separately try to identify it by its smell. Afterwards reconstruct these smells in your imagination, relating each to the flower to which it belongs. (after Pelman).

Repeat for ten days, with rest.

exercise Extracts Obtain a range of extracts, perfumes, essential oils, flower essences etc. Take two of them at random. Inhale the odour of one. Do the same with the other. Then moving away from them, think of the first smell, then think of the second. In your mind compare them, noting the difference. Repeat with different pairs of extracts.

Do this for ten days, with rest.

exercise Detail Differentiation Take a particular category of taste/smell and sample 6-10 varieties. If these may be sampled simultaneously - as in the case of cheeses - note the unique characteristics of each sample. Then arrange it so you may sample each without seeing it and guess which it is. If several may not practicably be tested simultaneously, as with bottles of wine - although wine tasting parties are a good excuse to do this - then make notes on the taste at the time. Compare your notes and memory of this taste with the next. Later compare your own findings with those of wine writers.

exercise Sensitivity Using essences find the smallest amount that you can detect by putting a drop into a pint of water. If you can smell it, dilute with another pint of water and throw half of the solution away. Repeat dilutions until any smell is no longer detectable. If one drop is not detectable add more drops until you can smell it. Repeat for 10 days with rest, making a graph of your results. Why can you smell better on some days than others? Does your sensitivity increase by the tenth day? Repeat with different smells. Compare results.

exercise Comparative Analysis Arrange to be presented with a pair of smells. Attempt to identify the two individual smells. If they cannot be named, try to describe them. If the separate character of the smells cannot be discerned ask for the name/description of one of the pairs. Does this help guess the other? What smells are easily distinguished? What smells merge? The selection of smells for this exercise are best selected over a range - as suggested by the classification mentioned in the introduction and paired in roughly equal strengths. This is an exercise for the advanced osmologist.

exercise Combinations Try three smell combinations making notes of your sensations. From these notes decide which smells are most elemental.

THERMAL SENSING EXERCISES

exercise To Objectify Temperature Sensations You must equip yourself with at least two air thermometers. One in the shade and under cover outside, and one in your room. If possible also have a humidity meter. Now at the same time every day for a year, keep a record in your diary. First assess the temperature by how you feel - taking into account changes of clothing, health etc. Note this guesstimate, then take the thermometer reading. At the end of every month, add your readings to a graph, made out for the year, and note the progress in the accuracy of your assessments.

exercise Surface Temperature Variations The simplest way of shaking or shocking the bodies heat control mechanisms out of their central heating slumber is to vary the surface temperature of the skin quickly without allowing serious heat losses. The best way to do this is to go to a shower with separate hot and cold controls - set the heat full on, then vary the cold until you can comfortably bear it. When you are well heated step out of the shower and turn off the hot. Then dive back under the now cold shower, for as long as you can bear it, or until you are well cooled off. (The first time you may only be able to bear a quick splash, but regular repeated practice makes the practise a pleasant and invigorating one). Then repeat this quickly 3 or4 times until you feel yourself tingling all over. This tingling is the lazy old thermonerve endings spluttering their way back into operation. The refreshing effect initiated by the tingling will continue for about half an hour. I have found that regular 'hot and colds' with a bit of jogging beforehand makes me practically immune to common colds, flu and other commonplace ills.

The aerotone, sauna, Russian and Turkish baths can do a similar job, but require more time and ,money. Outdoor swimming in Spring and Autumn will be as good, if you make sure you get well warmed up between dips.

exercise Radiant Heat Source

a. Blindfolded, get an assistant to move a lighted candle across a table towards your open hands, face, or other exposed parts of the body. Say as soon as you can feel the heat and record the distance. Then move the candle from close-by gradually away, across the table. As soon as the sensation of heat fades record the distance. Repeat daily for ten days with rest. Using the same area of body as a sensor and having the room at about the same temperature. Does having warm or cold hands make a difference to your sensitivity?

b. At the distance at which you can barely feel one candle alight. Arrange a short ark of unlit candles. Blindfolded, get a friend to light and extinguish candles in a random order. (This must be done silently - suggest using a taper). Guess how many candles are alight at any time. Repeat ten days with rest.

exercise Ice & Blood Find two small strong glass 'jam' jars with smooth bottoms. Fill one with hot water bearable to the hands, the other with crushed ice. Arrange for someone to track these slowly around your body using oil or talcum powder as a lubricant. Can you always be sure which the hot and which the cold? Note the varying sensations in different parts of the body.

exercise Extremes What is the hottest water you can put your hand into? (without scalding yourself or feeling pain). What is the coldest water you can dip into? Both extremes need to be approached cautiously and gradually. Know where to stop.

The hot extreme: Hot water from a kettle is gradually added to a bucket until you can't bear to keep your arm in for a count of five. Take the temperature of the water with a household thermometer. Record with comments. Repeat at regular intervals and compare results.

The cold extreme: Can be done in a bath (or shower if it has accurate temperature regulation) by gradually reducing the temperature of a bath by one degree each day. But it is a richer experience, done at the swimming pool or in the sea fol-

lowing the change from summer to winter. Attendance twice per week will give body time to adapt This technique. will improve the self-insulating properties of the body - and this helps guard against seasonal chills etc.

exercise Assessing Conductivity of Materials Different materials have the capacity to hold different amounts of heat. Metal holds lots and wood holds little. So, even when it is at the same cool temperature, a metal bar will feel colder than a wooden rod. Go around your garden (blindfold helps) or your house (the parts of it that are at a similar temperature) and check out the feel of different materials. List them in order of conductivity (check them against a table found in a reference library). Earth, tree, grass, concrete, water, glass etc. will all be at roughly the same temperature but will feel different because of their different heat capacity.

GRAVITY & MOVEMENT EXERCISES

exercise Basic Body Imaging How you establish the idea of an axis to the body in your mind will depend on the nature of your own imagination and your other knowledge. If you have a vivid understanding of the wheel for instance, you may use this as an image analogy. Seeing your axis like the axis in the hump of a wheel or as an axle. Study of the skeleton is also invaluable. And establishing an internal picture of your own skeleton.

Start off any imaging session with relaxation and a general sensory focus. Sense what is there now in your body. Accept things as they are. (technical term for this sense is proprioception.)

Allow your weight to hang from your spinal column. And then through the dead centre of this experience of your mass, allow a centre line to form (in you own way) and rise up through the torso and head. Finish this centre line way above your head. The line could be imagined as made of light, string, steel rod, or as an abstract - anything that feels light.

Once you have achieved this imaginative feat immobile - take it into slow movement. Gradually incorporate the imaging session into your everyday life.

Finding your centre line is of fundamental importance to all movement and posture including breathing. For further images see Activity section.

Note Example of movement with Image. With the centre line image established in a standing position - swing the arms around the axis. Turning from the waist. So the hips do not move. Swing back and for in an easy manner. The slower the movements can be done in image work the more useful information you are likely to be able to pick up; Another useful movement is a plie (knees bend). Let the sacrum drop just a few inches. Then slide up the long centre line.

exercise Tendon and Muscle Stretch Receptors

S-T-R-E-T-C-H your body in all directions. Make all stretches very gentle. Do not force limbs into painful positions. Use only the weight of the body itself relaxing muscles as much as is possible.

exercise Balances A good balance means that the bones must be aligned so that 'weight is transferred down through the centres of your joints, relying as little as possible on the support of ligaments and muscles.

a) Find ten positions in which you can balance for one whole minute on one leg. Five on the right, five on the left. Ten minutes total. Continue forten days with rest. How is your wobble?

b) Stand. Move up onto tip toe. Keep balanced, lower slowly through stand to crouch and on (if possible) to sitting on your haunches. Then up again. Arms may be held in different positions each time. Out to front, to side etc. This is a difficult exercise and to do ten up and down without toppling may take you months of daily practice.

c) Persevere.

c) Fix a beam close to the floor. A piece of timber 4"x 4" and about 10' long lying on the floor and fixed to a wall at one end will be sufficient. Walk along it forwards without looking. Walk backwards. Balance on one leg. Become confident on this 'line'. Advanced skills might be turns, hops and skips.

exercise Centre of Gravity With a light stretch to the whole body find the place that your body balances over this supportive 'pivot'. Then begin to move arms and legs and notice how the centre of gravity changes position depending on the shape you are making. Try and pin point this place in your body and notice how it shifts in relation to changes in body form. Don't worry about it - just play around with it in an aware frame of mind. You will gradually internalise an awareness of centre of gravity.

At first large movements are OK. Then as you get the hang of it reduce the size and speed of movements until movements are very slow and small. The most important information will be found on this microscopic level of perception.

exercise Experiencing Gravity We experience gravity in two ways, through the receptor in the inner ear, and by the weight it gives our limbs and body.

a) Falling - Most of us are so used to having our heads upright all the time it can be disorientating to feel gravity in a different direction. Stand relaxed on a carpeted floor. Close eyes. Bend knees and slowly lower yourself as low as possible (onto your haunches if possible), When you can do this confidently. without falling over, repeat process with head tilted forwards or to the side (keep eyes closed). As you begin to go down you will probably fall- roll softly - give into the floor. Keeping eyes closed roll around, gently, deliberately, disorientating the head in different directions. Before opening your eyes get up to standing. Take care that there are no hard objects to fall onto. Repeat for ten days, with rest.

b) Rolling - Lay on a warm floor in any comfortable way. Become aware of the weight of each part of your body as it presses against the floor. Imagine that your weight is gathered in the part of your body nearest the floor. Whilst the upper part of your body is light and airy. If you want a more exotic image think of your body as hollow containing an amount of mercury that evenly covers the lower surfaces of your body shell like a silver lake. Then, very, very gradually, begin to roll onto your side. Imagine the sensation of weight changing to the new area of floor contact. The upper surfaces are light and porous. Continue to roll, very slowly, from side to front to side to back; keeping relaxed with the sensation of flowing weight.

exercise Labyrinthine Receptors These sense acceleration and change of direction of the head or whole body.

a) Spin slowly and evenly around. Gently get faster then slower again. Repeat this exercise daily for up to five minutes. Do not allow yourself to become dizzy. At first you may only turn very slowly. That's fine. The aim is to experience spinning, acceleration and small changes of direction, not whirling. (Whirling is an ecstatic mode you may get into later)

b) Standing or sitting upright - allow the head to fall forward, and hang loosely. Feel its weight Then, very slowly and carefully, without pulling it up, roll it around to the side. Rest again and feel its weight Then to back and on to the other side, finally completing a full circle. This is a neck stretch, but become more aware mainly of the movement and position of your head. Daily.

c) With head hanging forward, swing the torso from side to side, using the weight of the head as a sort of pendulum, allow this weight to spin you off into a turn. Using the free swinging weight of the head as a momentum engage in a short movement improvisation. Concentrating your attention on the acceleration and change of direction experienced in faster movement.

exercise Learning New Movements

a) The first thing to realise is that learning a new movement sequence is a mental process.If the idea of the movement is well formed in the mind then the actual practice will follow relatively easily.

b) However, to create the movement in the mind or transfer it from the visual sense (having seen a demonstration) is an advanced skill. The sequence must normally be marked out several times. This means that you go through the movements slowly, or piece by piece, and become familiar with the vocabulary of flexures, turns and changes involved.

c) Whilst 'marking out', go over it in your mind. It is best to be able to 'do' the sequence in detail in your mind if you are going to remember it. When you have marked it out several times go over the whole thing in your mind.

d) This is only possible if you are fluent with the movement vocabulary used. If elements of the sequence are new, you may have to spend hours or more, learning them. However, a sequence may nearly always be simplified so it may be expressed within the vocabulary of everyday movements.

Details to be added later & gradually as experience accumulates.

MEMORY EXERCISES

exercise Short Term Memory Testing Someone reads out loud to you a set of random digits. The sets consist of from 2 to 10 digits. You repeat them immediately following the reading. 'The reader increases the readout size until forgetting is consistent. Before starting, the reader says this standard instruction:

"I am going to read numbers and when I have finished, I want you to repeat the numbers in the same order".

A similar experiment may also be arranged using consonants, different coloured cards, nouns, simple geometrical shapes or short phrases.

Note: Unusually high scores in short term memory are only possible if the sets are mentally organised into sub-groups are then given their own label or code.

exercise Memory: Criteria of Retention 1 Primacy and Recency The beginning of an event, lecture, film, journey, list etc., is likely to be remembered. This is also true of the final scene, passage, conclusion and so on. This characteristic of memory can be used to advantage by introducing the main points or characters early on and summarising the conclusions at the end. This principle will work for periods of several years (eg. at college) as it will for short lists of objects. It is also true for life as a whole in that early events are most influential and recent events most easily remembered in detail.

Application: Think of ways that first and last things seen can be designed to envelop the whole. With an essay this may be a first paragraph that summarises your argument and a final paragraph that summarises your main points.

exercise Memory: Criteria of Retention 2 Categories When a number of things have something in common they can more easily be remembered by grouping them under their shared feature. i.e. the group Instead of naming the individuals of a company business, the business is given a name. Perhaps the things fit into a natural series such as 1 2 3, or mountains/plains/seas. If the things to be remembered are completely disparate they may be artificially made into a linked set. One way of doing this is to include the things as part of a story. The story, as a rich set of linked ideas in which the disparate things are integral elements, is easily remembered.

Application: Take what you which to remember and list what the material has in common. If this seems unhelpful create an artificially linking structure e.g. an imagined house in which each to be remembered fact or object is visualised in a particular location.

exercise Memory: Criteria of Retention 3 Difference A foreign or exotic word might stand out from a passage of normal prose. A flower might stand out in a muddy battlefield. A sparrow would stand out in an aviary of finches. The weird, unexpected, unusually strident out of context, will be remembered. Exaggerations of SIZE seem to be especially effective.

Application: To memorise a forgettable name exaggerate or use an associated ludicrous metaphor that will make it stick in the mind.

exercise Memory: Criteria of Retention 4 Sensual Power The more enjoyable the sensation the more likely it will be remembered, all other things being equal. For some senses this means an increase in strength in others its a matter of timing, or transmedia effects. On a mundane practical level, reading material is more likely to be remembered if it has key words in colour and is as brightly lit as possible without glare.

A message in several media, ie. where different senses are stimulated, is more powerful than in one. It follows then, that an idea which is expressed through a story, will have more impact on the memory than a straight-forward statement. The more fantastic, evocative or powerfully illustrated the story, the more powerful the memory. However, best of all is to di-

rectly express the idea in actions. Sometimes this may be done as an experiment, sometimes as an exercise and sometimes it is a less specific action in the world at large. Sexual or sexually linked data will probably be easily remembered because of our pervasive taboo on sex and also because sex has a high level of sensory power. Anything vulgar, horrific, obscene or repulsive will also be remembered Anything associated with fear which is not actually threatening in itself. eg. a story of a murder, will be more easily remembered. This will very much on personal make-up.

Vivid perception is the best aid to retention. In this way the sense exercises are also memory improvers.

Application: To get people to remember what you say or write make sure it appeals to a range of the senses either directly or by association. A subject that is dull can be associated with one that is bright. Eg. a dull black and white plan will draw attention to itself by being pasted onto a coloured background

exercise Memory Criteria of Retention 5 Repetition and Review Repetition is essential for the retention of any low key/ complex information. Each time a particular object, process or condition is perceived, the memory trace is etched deeper'.

This principle can be used in two ways. In learning a passage of prose or collection of objects, the passage or collection must be run over, and over again, until it is learnt. Secondly, if the thing needs to be learnt so that it. is permanently ready for recall, then it must be reviewed at intervals. Review is recommended, 10 minutes after first learning; the next day; the next week; the next month; in four months After four or five reviews which are separated in time, the item enters the long term memory from which it is never lost. Further reviews can be of key words and areas only.

Repetition is most effective if it is active. If one speaks the words, with gestures. If the facts are made into a model, sculpture, poster or conversation topic. Passive repetition needs more cycles to gain an equivalent retention. This is the main ploy of advertising, where essentially unimportant material is absorbed simply by passive but repeated exposure. Passive absorption has the advantage of avoiding the reactive filters of the conscious mind. This may be put to good use in reprogramming the memory with a more positive outlook. (See section on autosuggestion)

As a mental faculty, memory cannot be improved by repetitive practice. e.g. By remembering more and more telephone numbers, you are not improving your memory as such. What you may be doing, if your memory gets better, is developing and improving techniques with-which~to-memorise without realising it.

Application: If a thing is worth repeating it is worth repeating at least three times. Rub it in.

exercise Memory: Criteria of Retention 6 Personal Interest Use value Retention improves with increased motivation. This may be due to an,increase in the intensity of perception. Whatever the reason, motivation is an important factor. If an action, object or knowledge can be seen to be of use then motivation increases. A perception that is irrelevant to our survival, or whose use is obscure, won't generate much interest and so will not be easily remembered.

Application: In setting up material to be memorised, it helps to make its use value clear. This seems an obvious point and yet in much common school work the reason why it is useful to learn the facts presented is not given. An interest may also be achieved by firing questions at the material until a link with personal experience is found.

NB. Artificial motivation may be generated by mystical or fictitious reasons of use, or by associating a 'useless' fact or object with one more fecund (one of the most common strategies in advertising!).

exercise Criteria of Retention 7 Attention and Concentration A basic perceptual/mental ability is to be able to concentrate the attention from the general to the specific. In this way the power of cognition is focused in a very small area. Other sensations and irrelevant thoughts are rigorously excluded to achieve this specialisation.

A one point focus is difficult to keep steady for long. Apart from mental interference from wandering thought (chains of association) there is the perceptual phenomenon of adaption. In practice attention is available for periods of 10-45 minutes depending on the material. Between these periods of concentration there should be breaks of 2-5 minutes for rest and assimilation. Consecutive periods of study should provide a variety of stimulus, ie. similar subjects and media should not be run in sequence.

Application: An environment free from distraction is essential. This is a personal thing but it is often useful to get our of your own house. Go to the local library or get a studio. Difficult material will generally reguire shorter, sharper periods of attention. eg. heavy technical information. Take regular breaks for exercise.

exercise Memory Criteria of Retention 8. Preparedness Are you in the right frame of mind? If your mind is elsewhere you will not be able to key into a subject as quickly as if you had 'warmed up' beforehand.

Application: You will do better in an interview if you have mentally reviewed your curriculum beforehand. Reviewing memories of a subject before a lecture will facilitate your retention of new facts and ideas. Things with which the new ideas can be linked are fresh in your mind.

exercise Memory: Remembering a Name

Relate the name of the person to the person in some way Make a connection. Any connection! You may have to be wildly imaginative. Repeat the name to yourself sub-vocally whilst looking at the person's face. Go on to study the face for distinctive features whilst repeating the name in your mind.

"John John JOhn JoHn JohN John John John". "Hmm, wart on forehead, grey eyes, grey hairs, unshaven, high cheek-bones..." Now make the imaginative leap: Imagine a golf ball between his teeth, suggesting John Player golf tournament. He couldn't smoke all the time then suggesting John Players cigarettes)

This means making quite a creative effort when you are introduced to people. 1t may not be easy if there is fear involved when meeting new people (some level of 'shyness' being very common).

Ask for the name to repeated, even if you can still remember it at that time. Repeat the names as often as conversation permits without giving an impression of over familiarity. The derivation of the name, or other people you know with the same name, may be used as conversational gambits. Linking the name to occupation (David the piano) is very helpful. It takes quite a bit of practice before a dozen new introductions at a party can be instantly retained, but it is possible with practice and ingenuity to compress the technique into very few seconds.

exercise Remembering Words and Sentences Select a succinct and simple piece of prose to develop your technique. Ideally also, a passage that is important to you. Half of the task is done if there is a very clear conception of what each word means; and how its position in the sentence qualifies its meaning; and how each sentence embodies a meaning of its own. Further, in exactly how the meaning of the sentence is expanded by those which follow it...

A good dictionary is essential - no words should pass doubtful or ambiguous. New words should be noted. (see next exercise).

Having thoroughly understood the passage to be mentioned, repeat the first few words keeping the meaning alive in your mind. Repeat them, until they are memorised. Then go on with the remaining words in the sentence. When these are implanted repeat the whole sentence, thinking what you are saying. Go on in this way, sentence by sentence, adding small units to the whole, until you have acquired a modest part of that which you wish to know by heart.

In any spare moments in subsequent days make sure you review the passage aloud. Further periods of learning should be planned on a regular basis until the passage is leant. You will soon get to know the amount of time you need to set aside for any memory task

exercise Remembering New Vocabulary When reading - new words are noted down and collected on the left hand page of a large exercise book. When the page has two columns of new words get out a dictionary and make minimal notes or thumbnail sketches along side each word.

Then write out an imaginative passage making use of all the words. The words dictate what happens next. Just allow yourself to associate wildly between the different words.

This piece of writing is then reread a few times in the next few days. It is surprising how naturally interested you will be in reading what you have created, however nonsensical it appears. You are reminded of the meaning of the words by the context which you have made for them (example below - The Story of Philosophy)

The Story of Philosophy

The broadsheet was a paragon of clarity. Netiara held the disquisition at arms length and admired the sharply rectilinear pulp wafer. Within its four corners the nasute iconoclast, feet planted firmly in illabile stance, roars challenge to the mendacious teleologic professors; a gowned and chalk dusted congerie of learned manhood. The proud chanticleers of humanities cerebral pandects, staring at the yellowed reflections of their own noumenal condition.

The vandal approaches within the distance that she may be certain of an expectorant bulls-eye. The excreted phlegm lands before them like an offering. A jejune master of approbation separates himself from the heap with a sedulous effort. He staggers forward with his head thrown back, a gurgling coming from his gaping mouth. As he approaches the pool of spit he lifts his arms and cloak and steps into the dance of the chimeric avatar with a concomitant persiflage directed up to a plaster relief of the Portola. His raillery becomes more agitated and gradually breaks into an airless ululation out of which the avatar would spring auguries damning the impatient appetite of the street-fighter.

At last, spent, he slid to the floor like a black bag of bones. The warrior spoke in deeply flowing tones. "You, where all is perspective and reflection... The Library cannot tell you of each nascent moment, an approbation of the crystal."

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exercise Remembering Ideas from Books & Reading Paraphrase the essential ideas to yourself as soon as you have read them. If the situation allows speak aloud to yourself (vocalising is in itself a great aid to memory).

Then read the crucial passages again and paraphrase afresh. In doing this think through, important points as if you were relating them to someone else. As you proceed through the book, describe to yourself the connections, between the essential ideas. This is done by relating each new idea to the preceding material. If the 'argument' or 'structure' is complex you will find it helps to use a keyword note diagram (see following ex)

After each chapter or other substantial amount, summarise the argument so far.. These summaries may be taped and played back when the whole book has been read.

Having made a summary criticise and question the ideas so far. Again, think out aloud if possible. Aim to make this as succinct as possible.

It is an 'effort' to start to use this technique when one has been used to reading being a passive, quiet activity. The extra effort will be rewarded by a much stronger and clearer conceptual life.

exercise Memory: Keyword Note Diagram Go through any previous longhand notes that might be worth reviewing and underline the key words and phrases.

a) Put a name for the subject area in the centre of a sheet of paper. If possible this should be represented graphically as a symbol or little drawing.

b) Branching from this are the main features to be considered - The primary key words or phrases. Draw a line out from the centre and print relevant key word/phrase along this line. Do not worry about 'organising' the structure - work fast. PRINTING THE KEY WORDS might be slower but the extra clarity is worth it.

c) Extend these initial branches out with an unfolding of details of the main features. Secondary keys are those subordinate to the main categories. See diagram...

d) Think of the keyword diagram as a picture. Use colour, code marks arrows, simple geometrical shapes, symbols. The first version can be quite messy and wild. The point is to make it lively, unique and memorable.

e) Review after 10 - 30 minutes, next day, next week, next month. The next day review should be a redrafting of the diagram - emphasis any geometrical forms or other patterns that suggest themselves. Re-arrange things to make corrections clearer. Add in things. Encircle important areas with colour

f) When taking notes of keywords keep an adjacent page for lists, diagrams, formulas, quotes and other stuff worth keeping as it stands.

g) The key note format may also be used to plan things out (eg. prepare a talk), clarify thinking in some area, make a complex process clearer.

exercise Memory: Stories & Gossip When things are passed on by word of mouth, certain changes occur. It is useful to be aware of these 'weak' points in the, fidelity of reported information.

Passing on a story 7 times: Choose a short story (say 300 words). Tape record it. Play tape to a friend and then as soon as the story has ended ask them to retell the story to you (and onto tape). This second version is then played to another person who, in turn, relates hir version onto the tape. In this way the story is heard and retold 7 times. Transcribe these stories and note how they evolve. If transcription is too difficult compare the last version with the first - It should be interesting to:

1. Compare what you see happening with the 8 criteria of retention. (see pg.) This experiment should illustrate the principles of memory. The results will vary with the type of story used and the personal experience of participants.

2. See what sort of process seems to occur as people reconstruct the story. It is said that errors of reporting are most common with colour, then position, then size and least of all shape.

3. Think about/ discuss how does this process will effect the dissemination of ideas in everyday life?

exercise Memory: Remembering Verbal Material In situations where you are unable to refer back to visual material for review, recapping is a useful technique. Using recapping also does away with the need to take immediate notes.

What you do is to interrupt the speaker and say you would like to ensure that you have understood what has been said so far. You then express in your own words the main points made and ask for correction if necessary. This ensures communication is fully understood. is a powerful memory aid and helps concentration (especially on boring or a powerful unpleasant material.

At the end of the presentation do a major recap of the material as a whole and ask questions for further clarification.

This recapping may be done with a third party after the event. It can also be used with books or film and video material.

exercise Memory: Remembering Lists of Things The making of lists is in itself an external aid to memory. A list allows items to be re-organised in a manner that the memory may more easily absorb. The structure of the list might suggest things that are missing. Priorities may be decided.

Basic method:

Read the list through at a regular rhythm.

Then covering the list with a sheet of paper, remember the first word. Move the paper down to reveal the 1st word - look, check, memorise. Try and remember the 2nd word, whilst it is still covered. Move the paper down to reveal the 2nd word - look, check, memorise. Repeat for the 3rd word - and continue through the list. Keep going through the list in this way until each item is anticipated correctly. Repeat a few more times. Now run through the list several times out aloud, faster and without the copy.

Review after 20 minutes,

6 - 10 hours,

1 day,

1 week

1 month (the list is now installed in your memory for life)

exercise Memory: Remembering Lists By Imaging

This exercise relies on the principle that if two simple events are brought into vivid relationship with one another then the subsequent occurrence of one of these events will lead to recall to the other. The relationship formed for this purpose may be quite arbitrary as long as it is vivid.

1. The first word of the list is read out aloud. Simultaneously visualise the word as strongly as possible.

2. The second word is then read out aloud and visualised. Make the images exaggerated and fantastic.

3. Now imagine an active relationship between the two images.

4. Having made this connection vividly, dismiss it from the mind and read aloud the third word and visualise it. It is important that the visualisations are separated and not allowed to become welded in a stream of fantasy. This selective attention may require some considerable practise.

5. Now relate the third image to the second.

6. Dismiss from the mind, read aloud the fourth word, visualise it. Using this process you can remember a list of words; by thinking of the first word the second is recalled and so on in a chain of associations.

Example: Bread, Pegs, Nails, Disinfectant, etc.

1. Bread - visualise as hot, delicious smelling loaf.

2. Pegs - visualise large coloured pegs on your own clothes line.

3. Bread & Pegs - visualise bread pegged out on the line to cool. Dismiss this relationship from mind

4. Nails - visualise 6 inch nails.

5. Pegs & Nails - visualise wearing a peg on your nose because of the smell of the animal pelt you are nailing out to dry Dismiss this relationship from your mind.

6. Disinfectant - visualise disinfectant going milky as you pour it in the toilet.

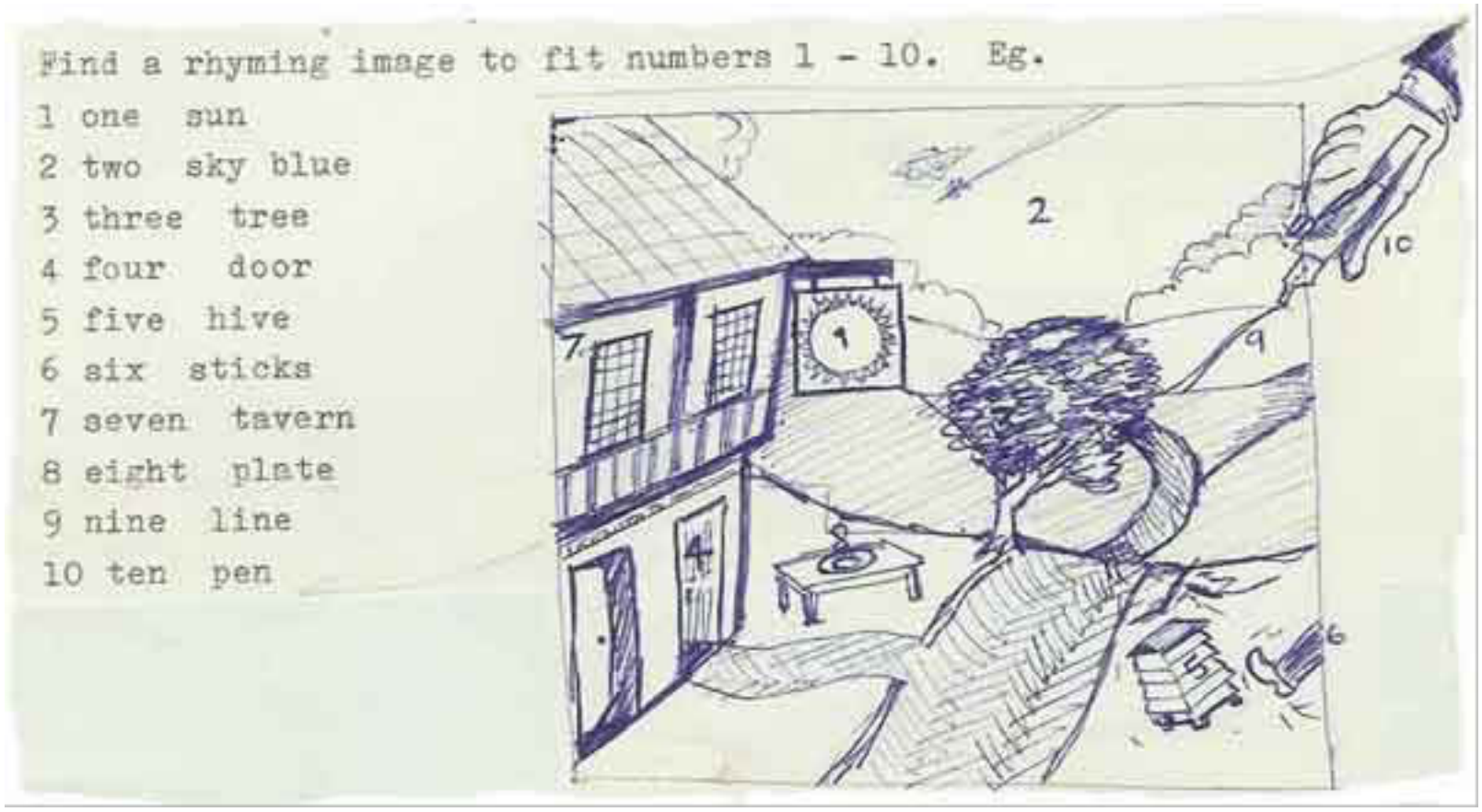
7. Nails & Disinfectant - visualise having accidently banged a rusty nail through your hand and you put disinfectant on the wound.

Examples are of limited use as it is to a great extent a process that relates to personal preferences and experience.

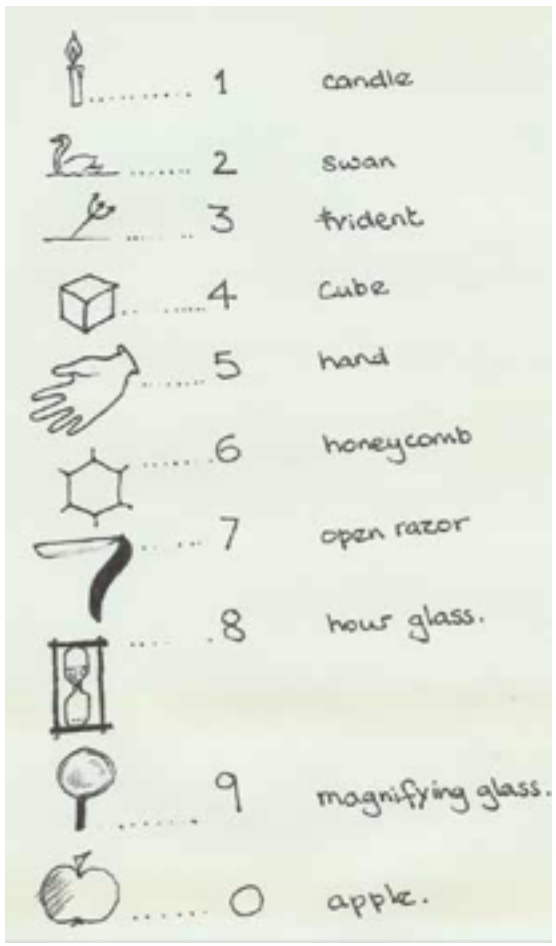
Practice learning a different list of 10-20 items each day for a week. Each day test yourself by running through the previous lists. You may find the process laborious at first but after practice the visualised connections may be made at great speed. After the initial week, practice as the chance comes along on such things as shopping lists or key words in notes.

exercise Memory: Imaging Numbered Lists (advanced)

Think of a rhyming image to fit the numbers 1 - 10



one - sun
two - sky blue
three - tree
four - door
five - beehive
six - kicks
seven - tavern
eight - plate
nine - line
ten - pen



Become really fluent with these set associations so that the number sequence and the images can be reeled off spontaneously and in any order.

Take the list of words that you want to memorise, and number them 1 to 10 eg.

1. Bread

2. Pegs

3. Nails

4. Disinfectant

5. etc.

Make an image relationship between sun and bread, blue and pegs and so on. In this way the list of words can be memorised.

The advantage of this method is that if someone asks you for the 7th item on the list you can remember it without having to go through the whole list.

Note: The Visualisation of Objects in Lists: It is found that when coming to remember lists by visualising, people often use their own methods of linking which are often not a definite system but a flexible and creative approach. Each object spontaneously suggesting its own best possible method. For instance if I visualise to remember numbered objects, I arrange or transform the object to link with the number. Thus no. 6 - bed - a bed with 6 legs. no. 5 - oranges - five oranges in a pentangle on a lawn. Sometimes the connections are not easy to describe but are felt to be quite strong. eg. 10 - floor.

exercise Memorising Numbers using Herdsons Mnemonic

The above systems may also be used to remember abstract numerical relationships. This may be done in several ways.

1. To make up a story which links the number symbols into a sequence. The richer and more surreal this story, the better. Eg. 7318035 - Shaving over a deep pool, I was surprised by a trident coming out of the water with a single lighted candle on its left barb, an hourglass on its centre, and an apple impaled on its right barb. The trident disappeared again in a swirl of wave, I found myself waving goodbye.

If the number was a telephone number, the whole story could be made to remind you of the person whose number it is. Eg. 674 8850 - I am walking down a lane, I look down and see a hexagon marked on the path, looking up I am confronted by a robber holding an open razor. I offer him some sugar cubes but he demands to see my pack. He selects two large hourglasses which he can hardly hold in his free hand. He goes off and I sit down, quivering with shock to eat an apple.

This takes less time and is more entertaining and lasting than rote learning of the numbers. If you find difficulty in beginning a story imagine yourself on a walk. The symbols are seen in particular settings en route whilst taking the walk. Or, arrange the symbols to occupy different parts of an imagined space (room, house, castle etc).

2. Numbers are otherwise better remembered if imagined as active and sensually interesting activity. Eg. Digits may be imagined as 'written on a blackboard with a large lump of soft chalk in your own handwriting'. Or numbers may be linked to musical notes and remembered as tunes if you have the necessary tonal skill.

exercise Memory: Arranging to Recall at a Time in the Future

What we do is form a strongly imaged connection between, the item to be remembered, and the time at which you wish to remember it. For instance, the people two doors away have asked me to feed their cat whilst they are away at the weekend. I have no interest in cats so I realise my mind will not easily remember as I have a busy schedule at the weekend. What I do is spend a minute or two of intense concentration, making connections between cat and, say, the kettle. In this way, every time I pick up the kettle I will think of 'cat'.

- cat kat ket kettle
- spout of kettle like a cats tail
- steaming hiss like a cat's hiss

The kettle is used at intervals during the day at which it would be convenient to go round and feed the cat. This process saves me from 'worrying about remembering to feed the cat'. Practice in making imaged connections can speed this process up to a matter of seconds.

It is worth noting that the mind seems to have its own time clock. We can decide to wake up at a particular time by deciding to before we go to asleep. If there is no set schedule to the day we can use this 'sense' of time to remind us to do something, like making a phone call at a particular time. Notice when you already using this faculty without being aware of it.

ASSOCIATION EXERCISES

exercise On the Process of Association Make a random collection of small objects. (say 50) in a cake tin or small cardboard or wooden box. Pick out any object. What does it suggest to you? Keep that suggestion, preferably your first thought, in your mind. Look through the objects and connect this suggestion to another object. What new suggestion does this second object offer you? Connect suggestion with third object and go on like this until all the objects are connected. As you connect them take the objects out of the box and place them in line on a table top. Repeat 3 times with the same objects, but in different orders and making different connections..

exercise To Understand How Association Works in General: and how, in particular your personality makes connections Take a word, thing or process. The thing or process should be represented in a single word, symbol or even photograph. Write, draw or stick this in the centre of a large sheet of paper. Then using the word or picture as a focus, write around it as many associations as you can jot down in 5 minutes. This in itself may be revealing.

It is interesting to see someone else's associations and thoughts around a subject as a reference point from which to judge your own.

Another stage to which you can take this is to do another version in which you allow more structured thinking around the subject. Represent this thinking by key word notes which branch out to follow different sequences of thought.

This process may be found useful when entering upon a new subject of study. The extensive associations give you a clear sense of what surrounds the subject in your mind.

exercise Collecting Collect a miscellany of about 200 small objects, (pencils, coins, cards, mechanical bits, containers, books etc) in a cardboard box. When you've got a lot, tip them out onto the floor and look them over, Decide on some way of arranging them according to some principle. Eg. according to shape and size, according to colour, frequency of use, value etc.

Arrange them in at least 5 different ways. How many ways can you think of arranging the objects in a meaningful way? What preferences have you got? When is contrast preferable to graduation? When is dis-order more agreeable? How do the things you observe relate to bigger issues such as the arrangement of furniture in your room?

exercise How Association Links Casual Thoughts Sit and daydream. Allow your mind to wander. Have a notebook by your side and every half minute make a one-word note of the thought you are having. Jot this down in such a way as to disturb your reflections as little as possible. In this way you can keep track of your wandering thoughts.

After 10 or 15 minutes stop and look at your notes. See if you can identify the connections by which they lead one from the other. Often the link is not 'rational' but simply a quite arbitrary association.

Repeat this exercise daily for a week. This is a study of how your mind's uncontrolled action finds continuity. Similar mechanisms operate in dreams.

exercise Associating Real with Abstract It is worthwhile taking the time to make symbolic connections between material reality and abstract concepts. eg. The smell of freshly turned soil and the fertility of the earth and its potential bounty. In this way, a simple perception brings to mind the abstract idea. The experience as a whole is enriched by such consciously intended associations. A single flower can bring to mind the 'productive power of nature'. Smell seems to be a potent sense with which to make such associations.

1. An inspiring poem, thought or whatever is recited, or even memorised, in the presence of a strong, clear sense impression, until the association is imprinted on the mind.

2. Having come across an heady sensation, make the decision to give yourself with it. Do not rush on, but pause, absorb the experience and allow the mind to fall into reverie. Find the most worthy thought that comes to mind and explore it in this time.'

3. Create a ritual around the idea.

exercise Sartorial Associations The clothes we choose to wear always communicate particular attitudes even if its 'I'm not caring about my appearance' or 'You can't label me'. They also identify us with our social groups You can tell a lot about a person by the way s/he dresses. The clothing conventions of particular groups are more rigid than most people are prepared to realise.

Try adopting a particular style of dress for a week and note the differences in the way people react to you. Then change to something different for a week. Continue this chameleon existence for a month. Even in this short time you will be able to make enough observations to considerably develop your sartorial skill.

You can try more subtle changes. Sometimes these can get just as dramatic a reaction as complete changes of costume. Odd socks can cause excited comment and laughter. An extra shirt button undone can make difference between casual and sexy.

exercise Associations in the Environment

a) Select about 10 objects normally in your room that you like. Note your own associations with each of the 0 b j e c t s Then arrange to present them one at a time to a 'panel' of friends. Each member of the panel is asked to write down the associations that occur to them and then their opinion of the objects.

b) Change the colour of your front door every month for a year, and keep a diary record of the different reactions you get.

c) What do people associate with you? Put a full-length photograph of yourself taken outside your home in the middle of a clear sheet of paper. Ask a variety of people who know and don't know you to spend 15 minutes writing down all their associations. Be brave, encourage people to be uninhibited.

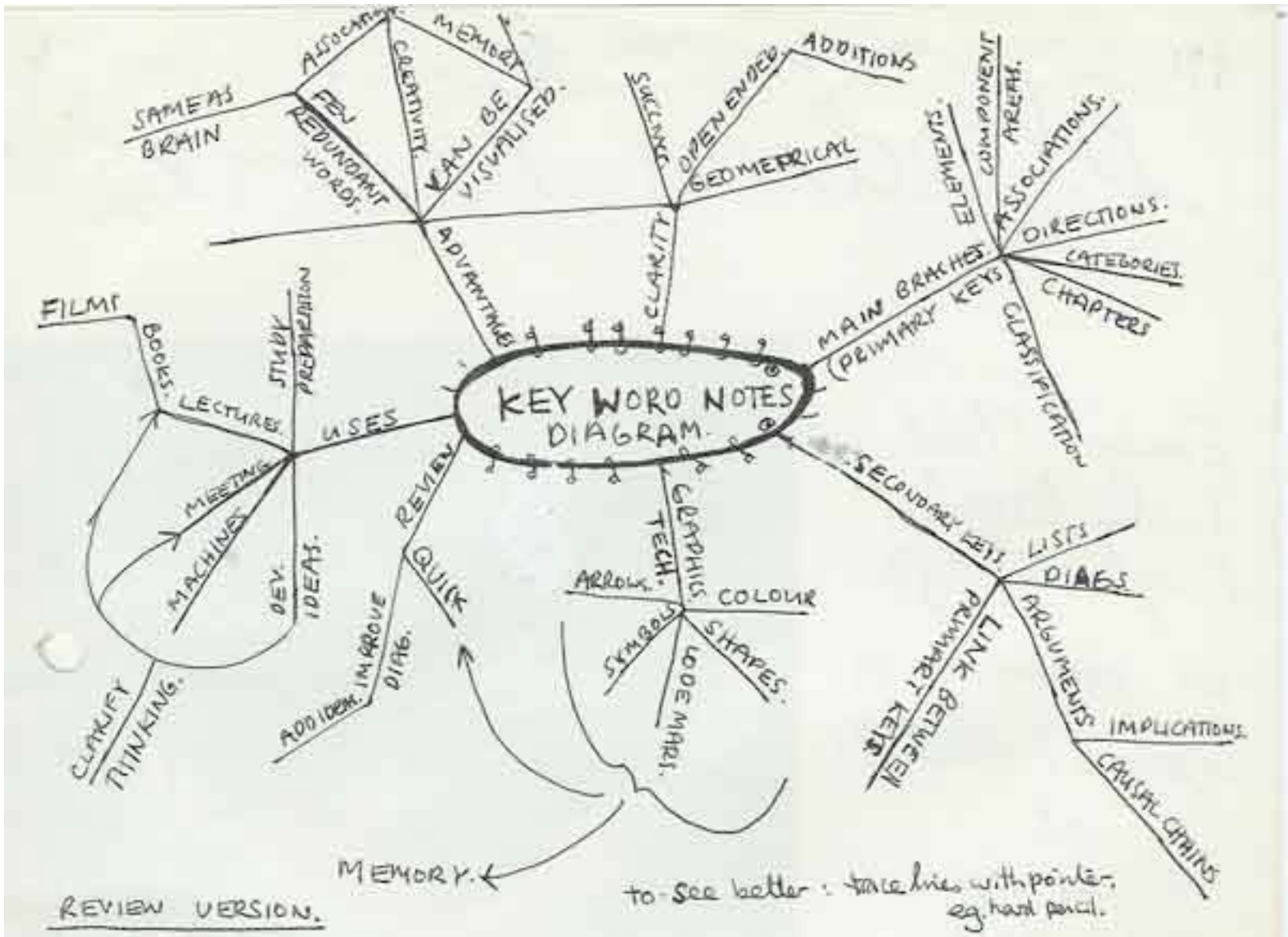
What do you learn about how you appear to other people from this exercise?

exercise Drift Association can generate ideas. If we enter a fresh situation with an open-ended direction in mind, the random connections provided by the environment will spark novel relationship and thoughts.

The 'rich situation,' can be an I Ching reading or a novel like Finnegan's Wake by James Joyce, but in my experience nothing can beat a real journey.

The journey should not be too tightly planned. Give your intuition the reins. Routing may arbitrary. Aimless drifting is good. make decisions as things come up. Stop pre-empting. Be open to changes. Jump at opportunities as they arise.

Journeys of this aimless sort can be used at critical times in life as a major catalyst of creative re-orientation.


KEY WORD NOTES DIAGRAM.
ADVANTAGES
SAME AS BRAIN
ASSOCIATION
MEMORY
CREATIVITY
FEW REDUNDANT WORDS.
CAN BE VISUALISED.
CLARITY
SUCCINCT
OPEN ENDED
ADDITIONS
GEOMETRICAL
MAIN BRANCHES (PRIMARY KEYS)
ELEMENTS.
COMPONENT AREAS.
ASSOCIATIONS.
DIRECTIONS.
CATEGORIES.
CHAPTERS
CLASSIFICATION
USES
FILMS
BOOKS.
LECTURES.
STUDY PRESENTATION
MEETING
MACHINES
DEV. IDEAS.
CLARIFY THINKING.
REVIEW
QUICK
ADDITION. IMPROVE DIAG.
GRAPHICS TECH.
ARROW.
COLOUR
SYMBOLS
SHAPES.
CODE MARK.
SECONDARY KEYS
LISTS
DIAGS.
ARGUMENTS
IMPLICATIONS
CAUSAL CHAINS
LINK BETWEEN PRIMARY KEYS
MEMORY.
REVIEW VERSION.
to see better : trace lines with pointer. eg. hard pencil.

MEDITATION EXERCISES

exercise Meditation Gaze at the second-hand of a clock without the slightest waver of attention. As soon as your mind wanders note the time. As you repeat this exercise you will notice your attention span increasing.

Some gurus claim that if you can keep full attention, without wavering or being mesmerised for thirty minutes then you have achieved enlightenment.....

Heaven is only half an hour away.

exercise Meditation The basic principles:

1. Sit comfortably, in a quiet, safe, calm, place. Do not lean or slouch but gently hold the body erect. The head should feel as if held up by a thread attached to the top of the skull.

2. Close eyes.

3. Relax the whole body gradually, part by part, up from the feet. (Instructions from a tape or another person may help concentration here)

4. On each out breath visualise (I) or an infinity symbol (or any non-distracting symbol)

5. This symbol is used as a fix to steady the mind. When a meditative 'frame of mind' has been achieved (this may take many weeks of daily practice!) allow other perceptions and thoughts to intrude into your field of concentration. Watch them in a 'detached way - try not to get caught up in them... return to symbol as soon as you do.

6. Do this for a set period each day. End of meditation may be signalled with an alarm or gong. Recommend starting with 10 minutes and building up to one hour.

7. Before and/or after sleep are considered the best times to practice.

8. Guidelines:

B r e a t h i n g

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Watch the mind wandering and finally;

return to breathing

/\/\/\/\/\/\/\/\/

Perhaps sexual or other distracting thoughts arise ... here they are obliterating all else .. watch your sinking into them ... watch your enjoyment of them . watch your guidance of the thoughts ... watch how powerful they are... how they tighten muscles, pull on sinews. Watch now how your memory comes into action, reminding you of your meditation... watch your will power coming into play, r e t u r n i n g your attention to breathing.

/\/\/\/\/\/\/\/\/\/\/\/\/

Did your will power interfere brutally with your sexual fantasy? It didn't let you see exactly how the thoughts faded, how the body changed, how the breathing altered. Oh yes, b r e a t h i n g /\/\/\/\/\/\/\/\/\/\/\/\/\

Suddenly you realise money is on your mind. Where did that other fiver that you thought you had in your pocket disappear. You worry about it worrying you. Let all these superficial thoughts be absorbed by the deepening breath. Rising and f a l l i n g like an in coming tide.

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The meditator is a hunter, catching the nuances, the connections, beginnings, mixings, changes and endings in our stream of consciousness. If you can see how a thought arises, how it persists and how it fades, it is said that thought will have no untoward power over you.

DREAMING EXERCISES

exercise Remembering Dreams

1. Put a notebook and pen by your bedside.

2. On awakening; do not open your eyes and lie perfectly still. Any quick motor movement may throw the dream into oblivion.

3. Ask yourself the question, "What has been dreamt?" but do not search for an answer or try to remember. The dream will come flowing back of its own accord.

4. When you have run through the dream again in 'remembering' it, open your eyes and gently note it all down. For therapeutic purposes it is more important to describe your feelings (be generous with your adjectives.) than the facts of what occurred. Do not hesitate to paint or draw if this comes more easily.

5. Persevere with this method. At first you may get nothing or just remember snatches of a story or just a vague feeling. Put it all down and your recall will gradually improve.

exercise Control of Sleep dreams To direct your night dreams you must immerse yourself in the subject you wish to dream about. You must be fully concerned with the subject and seriously desire to dream about it. Sit in a quiet place and think of your dream topic. Decide what you want to dream about and say it out loud at intervals throughout the day and again, especially, just before you go to bed.

You must fall. asleep with the quiet confidence that dream machine will be working for you through the night. Morning will come, you will awake and things will be much clearer. You can mutter something along the lines of; I'll leave it to the dream machine to solve that on, as you fall asleep.

Your dreams are likely to reflect your innermost fears and thoughts about yourself so you will have to be ready to work hard in the preparation to divert the flow of your current subconscious preoccupations.

exercise Technique for Day Dream Generation

The generally accepted preparation is [relaxation]. However this is not essential as some people will see images when tense or frightened.

Another method is to create some rite of entry,

DuPotet, for instance, would draw a white chalk circle in the middle of a black floor and ask his patients to stare into it until they experienced visions or hallucinations. Mary Watkins, Waking Dreams 1977.

Freud would press his hand onto the clients forehead to elicit any image, emotion or memory. include gazing into crystal balls; pools of water or mirrors. Apart from the physical relaxation that is usually necessary the routine concerns of the consciousness must also be encouraged to subside.

This is possible through concentration (links) It may also be done by using an image. E.g. Becoming like Water. Play Beethoven's Moonlight Sonata first movement (optional) Think of water. Pretend this water is you. Your routine preoccupations create waves and ripples, currents and whirlpools. Gradually allow the water to become still. The ripples become smaller and less frequent and the water becomes clear and still.

Initially this should be read to you slowly by another person or put on tape. It may be embellished, or repeated until you are in a good space to receive a dream. The point to be made here, is that you must experiment to find the rite of entry into dreamland that is most appropriate to you as an individual.

exercise Daydream Direction and Control If your daydreams are irrelevant, erratic, unfocused, confusing and generally not getting anywhere it may be useful to start off by 'entering' an imagined archetypal scene.

The scene should, as far as possible, be emotionally neutral in itself so that the dream activity that evolves out of this scene relates to current feelings in your mind rather than associations with the scene. A meadow, hill or brook are usually suitable. (check that the scene you chose doesn't have any strong associations for you.) The procedure is to do the preparation, then conjure up the entry into it for yourself. (Exercises in the section on imagination will be helpful here especially with regards to 'entry') Then once you have got yourself into the dream let it take over and develop as it will.

It is helpful if you can relate the dream to someone else as you are having it. This will keep part of your attention out so you do not get 'lost' in the fantasy. This relating can be done in any media e.g. dancing, painting, words.

Used in this way daydreaming can allow you to discover the character of your own subconscious. Invaluable in the development of all your thinking.

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Leuner's Ten Themes for Directed Fantasy.

1. Plains, prairies and open country.
2. Progression from a plain up a mountain.
3. Descent following the course of a river.
4. House visited from top to bottom.
5. Pick a name then describe the person who fits this name.
6. Imagine a person you know, describe them in detail.
7. Meeting a driver on a lonely road.
8. A walk in a swamp or cave.
9. Images from your own scrapbook
10. A pot pourri from the above.

note:

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exercise St George Slays the Dragon

Daydreams may be used in a more aggressive way to change yourself.

Working from themes or symbols that have occurred in your own sleeping dreams is often most productive here. Refer to your dream note-book. As before, imagine the consciously chosen starting situation as realistically as possible. Then you enter the dream (and this entering may not come without some practice) and allow things to happen.

Your will probably find some images that appear threatening. Keeping in mind that the images are only mental fabrications, are not real, and are only to be taken metaphorically... allow things to happen as they will.

Any difficulty you have whilst in the fantasy is known as a 'resistance'. These resistances represent real impediments/ blocks/ fears in the actual personality.

Working on these resistances can lead to resolutions of real mental dis-function and/or a deeper understanding of self and values. Dissolving or combating heavy resistances should be done with the help of a supportive guide who has experience in these things, as the emotional catharsis that may result can be dramatic and disorientating.

exercise Inventions Invent something new. The new thing can be functional or it can be purely for fun. Don't take your results too seriously at first... do it for a laugh. The majority of 'inventions' that are actually patented are fairly silly things so don't worry if your first attempts are quite ridiculous.

Two types of invention may be usefully differentiated; The first is the open ended creative design such as grotesque new animal, mysterious monument or entrancing garden in which we use our life experience to produce something origional

and unique. The second has very particular goals and usually a very specific function. e.g. a new tool for peeling potatoes, frightening off burglars, making beds or washing dishes.

First Type: Method - Allow your imagination to produce images associating from the basic idea. Note these images down and be on the look-out for an appropriate structure around which to organise the best of these images. Then image purposefully to fill in gaps. E.g. You decide to design a garden sculpture. You wildly list ideas picturing them vividly in your mind. Thinking of a structure you decide on the four points of the compass. You then pick images from your list that illustrate west, east and north but there is nothing appropriate for South. You then image purposively around the idea of 'south' until an appropriate image emerges.

Second Type: Method - Intensive study is usually necessary in the area chosen unless we already have great knowledge in this area. Methodical thinking goes hand in hand with vivid association of imagery E.g. How would you make traffic lights more responsive to local traffic conditions? Before attempting to think of an actual design think of at least ten completely crazy ideas for achieving this end. You might have to research to find out exactly how traffic lights work at present and if possible the criteria which the designers were working to. other automotive control reading will probably be in order but perhaps the technology from another discipline will provide the key association.

Designing a potato peeler you might be able to use knowledge from your own domestic experience. It is perhaps better to choose such a subject for your first exercise as the required information can be obtained from convenient and direct observations.

exercise Self Imaging Situations Conscious imagination facilitates the achievements of real effects through catalysing the intuition (whole mind). Goaded into action in a willed and worried way the mind operates in a linear and often clumsy manner. Catalysed by an image the multi-dimensional and roundabout ways of the mind are exploited to their fullest. Results may be achieved in subtle ways. For example:

1. Interview (being self-assured socially). Imagine yourself at an interview. You are completely in control. The interviewers have expressions of amazement as you tell them your capabilities. They are extremely friendly and seem genuinely interested in everything you say. You ask several questions, etc.

2. Redecorating the House. (i.e. getting something done). You come home and change into painting clothes. Up the ladder straight away, you chip the old paint off whistling merrily until it gets too dark to continue. Getting up early the next morning you just have time to put on a coat of primer whilst listening to 8 o'clock news, before the rushing off to work. That evening the undercoat goes on followed by the top coat next morning.

3. Confidence in the face of intimidating power structures. Imagine seeing the mayor about your housing situation - he can't help but the chief housing officer is impressed and not a little apprehensive at your air of authority; he steps in and assures you he could provide property for your Housing Coop. Then, you leave and make an appointment to see your boss later in the day. She can only see you for a few minutes but says she has enjoyed listening to your suggestions. You return to your office and call a quick meeting to put everybody in the picture... etc.

4. Write five or six outline scenarios, perhaps a bit longer than the ones above, about areas in which you would like to change or get things done. Realistic scenarios which are just one step away will produce results easier than 'impossible' dreams - a powerful trained imagination can achieve incredible feats of self-redirection.

exercise Self Imaging - Generalised Assumption: We are all fundamentally self-confident, highly and flexibly talented, and capable of learning anything efficiently. It is only negative conditioning and the suppression of natural reflexes (such as the emotional outlets of anger and fear) that have obscured our power.

We may use imaging to regain a picture of how we actually are and, at least to some degree, by-pass the wrong conditioning. The more strongly we more can entertain an affirmative image of ourselves, the more effectively will we counter the pressure of incorrect conditioning.

A Personal Self-imaging Guide

- I am pleased to be me, to consider myself gives me a warm glow of satisfaction.
- I find no fundamental conflict between myself as an autonomous and yet co-operative being.

- The hurts and mistakes of the past are finished and I bear no grudges to interfere with my future progress.
- I am a creative power - I make things happen.
- I am a caring, loving, sensual being.
- I will get all the support I require if I think and ask clearly.
- My days are filling with sensual pleasure and stimulating thought.
- There's plenty of time.
- Nothing diverts me from what needs to be done.
- Fear cannot stop me, I shake it off like water off a duck's back.
- As I breathe easily my body adapts and repairs.
- I do my best at any moment, suggestions to the contrary are not my problem.
- My actions are effective in the world.
- My thoughts get straight to the point.
- Not a moment of my life is wasted.
- There is nothing (about me) in the way of me getting all I need from life.
- Limitations of cultural or gender stereotyes will not stand in the way of me claiming my full human heritage.
- I am not intimidated by values which I do not myself hold.
- I value the respect of people attained through sticking with the truth rather than the collusions of timid men.
- Crying is a sign of manly strength not weakness.

You must design your own individually tailored affirmative imaging guide. Write your directions in your own language to contradict the particular mis-conditioning that you have suffered.

Repeat them (10-20 times) and note sympathetic imaginative effects that arise. The imagery may then itself be repeated or reified (i.e. translated into a real thing e.g. a picture).

exercise Materialisation The vividly imagined desire motivates mental processes which seem to produce concrete results, in a roundabout and often difficult to follow way.

Method

1. A firm decision must be made as to what you want. The object or condition is then imagined as already there.
2. You must be clear about your motivations.
3. Set a scene in the imagination. Be in it.
4. Imagine your desired object or activity as being present in this scene and in active use.
5. Imagine the wish is fulfilled. There is a feeling of inner contentment.
6. Release the whole scene like a bubble. Let it 'float away'.
7. Rest, sleep if possible. Don't 'disturb the seeds'.
8. Have faith. Continue to work for your objective in rational ways as best you can. Be alert but not constantly expectant.

exercise Moving from Dreaming to Imagination It is useful to be able to move from a wild day dream to a controlled articulation of imagery.

Prepare as for day dreaming. Set an alarm clock or egg timer to go off in 2 or 3 minutes. When the timer goes off select the current subject of your dreaming and explore it imaginatively. Make it as 'real' as possible. If it is an abstract concept - bring to mind a range of image associations.

Being able to snap out of a day dream and consciously consider a topic that has arisen is of great use. After some practice forgo the alarm and 'snap out' spontaneously, note down subject and diagrammatically map associated images.

Note: Advanced skill. The reverse process may also be useful. To be able to daydream for controlled periods at appropriate points in a conscious thought process. Appropriate points are places where complex muddle or lack of ideas has made issues unclear or solutions not forthcoming. Also requires skill at speedy relaxation.

exercise Distancing Ants Eye - Bird's Eye An exercise to practice the imaginative capacity to see the world from different points of vantage. This exercise is best done in a group. Select a well known place in your town; a market square, Town Hall, park, office block etc. Describe the place spontaneously from the points of view of:

1. a baby in a pram
2. a balloonist
3. truck driver
4. newspaper seller
5. police person
6. young child of 3
7. an ant
8. a merchant banker
9. a councillor

Take two or three minutes on each viewpoint. The number of viewpoints may be reduced if there are several people in the group or time is limited. The group also needs to be relaxed to get the kind of insights this exercise can immediately produce.

exercise Inner Guardian A realistic persona, may be created by your own mind who may then be asked for advice or guidance when your own judgement needs 'support' or can't see the wood for the trees. It seems that such a construct can bypass certain types of mental block (e.g. confusion or lack of confidence) and produce valid thought not available by direct self-enquiry. Some people claim super normal powers for their guardian angels - but it must be remembered that the power of a guardian is limited by what is really possible from your own mind and body. Seemingly supernatural guardians are therefore demonstrating how much of our total power is occluded by a maltreated consciousness.

To make yourself a guardian build up a conceptual model in great . detail. First choose a guardian type you like (wizard, angel, fairy, genie, witch etc.) and can hold in your imagination easily. Then elaborate the details of an individual over some time. The character and appearance of the guardian should be developed as 'realistically' as possible. The character should be chosen as one that you can trust and may be modeled on a real person or persons.

exercise Inner Guardians and Guides Rather than build up your guide with a conscious imaginal effort it is also possible to create a ritual situation so the 'guru' appears fully grown from the unconscious.

Go to a lonely abyss or cave. Rub one small stone over a large one in the direction of the sun. Continue for 3 days. After the third day a spirit you can talk to will emerge from the rock. Naranjo 1971 (in M. Watkins 1977 p.107)

exercise Getting into Your Imaginary body

With eyes closed. Stretch out your imaginary hand and you see it before you as you would in reality. Raise head and imagine that you see the front of your body, your clothing and shoes. Describe the landscape you see in front of you in

your waking dream and then turn your imaginary body around and describe the one to the back of you. from Freligny & Vivel, 1968 (Watkins 1977)

Developing your imaginary body is a conceptual tool that allows you to get emotionally involved with your imaginal environment. This imaginal ego may have a different appearance to your physical body. The differences may be slight or you may find yourself in the guise of a different species of being. It is good to make a detailed drawing of this imaginal body.

More advanced work with the imaginary body

The imaginary body (which is your vehicle for travel in imaginal space) may be given a home/base and put to work in various ways. For instance it may be put in charge of the 'life programs input tapes console' in the cranial control centre.

Be sure that any fantastic extensions of this fantasy are symbolic of realistic expansions of your own power and control. These can take the form that most excites you but are best kept simple - danger some people might get lost.

exercise Creative Play - Invention Pair off with a young person (e.g. 18 months or younger). Gather a few harmless objects from the corners of the miscellaneous drawer. Forget any original specific function those objects may have had. Watch each other play with the objects and exchange approach. How many different ways will the objects fit together, bang down, balance, be sucked, spin, drop, open up, make noise, take apart, move past.

Note: Much play uses the imagination directly with present perception. An egg on the table seems to grow horns and become the head of a Viking warrior. We are not hallucinating - but possibilities can become vividly evident to us.

IMAGINATION EXERCISES

exercise Basic Visual Imaging Prepare a series of colour squares; dimension 1.5" to 3" and a range of coloured backgrounds covering the colours of the spectrum.

Study a white square on a black background for several seconds. Then shutting the eyes, try holding this picture in the minds eye for a count of 30 . . . . . .

Do this with different colour combinations, practicing in a systematic way until you can conjure up any colour square against any other colour background. Having achieved the basic skill, get a friend to call out combinations whilst you sit with eyes closed imaging them as they are called. Go for clarity and steadiness of image.

The next stage is to image using triangles and circles as well as squares. When these shapes have been successfully imaged try the purely mental exercise of switching a red square into a red circle into a red triangle, red triangle into blue triangle into blue square into blue circle etc.

exercise Face Imaging Practice imaging faces until you can 'see' them in your imagination, large and detailed. Do this by studying a face on a bus or in a magazine then shutting your eyes and reconstructing the face with your imaging faculty.

Then when you can do this, have a five minute session with your eyes shut bringing to mind a series of faces. Each face should be 'held' for several seconds as a clear image and may even talk or make different expressions. Try and make one face merge with the next. The series may be chosen from different situations. e.g. friends, films, neighbourhood, lovers, relations, business acquaintances, advertising models, bus conductors etc.

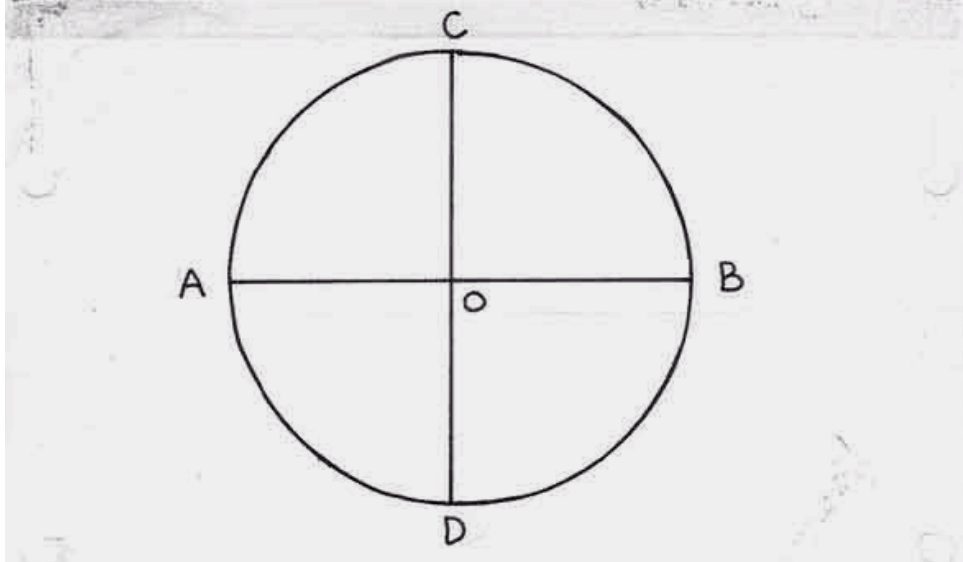
As an advanced experiment try imaging a series of faces you have never seen. Hold each new face for several minutes and examine it in detail.

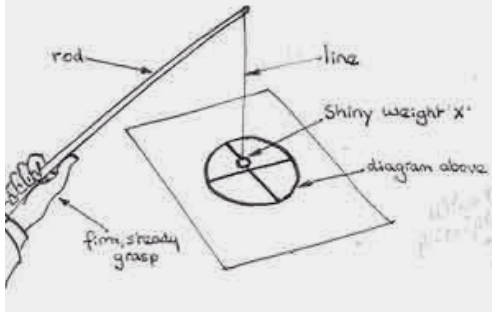
This exercise may be more fundamental to our imaging ability than exercise 'basic' above as the first pattern we looked for after birth was a human face.

exercise The Effect of Imagination on the Body

Chevreuls Pendulum effect

Demonstrates how the imagination begins to effect (muscle) action on a very simple level.





Excercise 1. Occlude 'O' with weight 'X' (one eye closed.) Attention! The mind dwells on AB panning along it from one end to the other. (You will find the pendulum swinging along AB — seemingly of its own volition. Now transfer attention to CD. —
Finally follow the circle with your gaze. This principle of 'teleology' may be used to tap the subconcious.

Occlude ‘O’ with weight X (one eye closed). Attention! Let your mind dwell on the A-B axis panning along it from one end to the other. The weight swings on the same axis. Now transfer attention to C-D… Finally follow the circle with your gaze. This principle of apparent teleology may be used to tap the unconscious.

exercise Picture Imaging Go to an art gallery and stand before a well known painting. Study the painting for not less than five minutes until you are familiar with all its details. Now, sit on the nearest chair and imagine the painting with your eyes shut. Return to the painting to fill in details that escape you. Return to the painting again and again until the painting lives as vividly in your imagination as it does on the canvas.

When the picture is established allow it to come to life. Figures move, leaves rustle, water twinkles. Notice how the impression changes and the picture evolves. Blink. Can you now regain the original image?

exercise Visual Imaging Game Two people sit facing each other over a table equipped with paper and coloured crayons. Each person draws a simple diagram using, perhaps, only two colours and then holds it up for the count of 10..... The diagrams are placed on the table face down. Both people then attempt to reconstruct the diagram they have seen.

The original and the transcript are compared. If high fidelity has been achieved the partner does the a step more complex with, perhaps an additional colour. If however reproduction is inaccurate, (the judge is the reproducer hirself) then the diagram is made simpler until accurate reproduction is possible.

exercise Visual Image Exchange Two people each gather about a dozen pictures (postcards, cuttings, reproductions of paintings, photographs etc) Don't show your partner the pictures.

One person describes the contents of one picture in detail to the other person who sits relaxed with eyes closed. Description finished the recipient asks questions until s/he has established a detailed and stable image.

The actual picture is then offered as comparison. Roles are swapped.

exercise Visual Image Manipulation Advanced Control As a final test of your complete grasp of visual imaging chose an object from your room which you can visualise clearly.

Holding it in your minds eye... make it rotate, stop. Then walk around it whilst it is still. Look at it from above then from underneath. Move it away from you until it is in the distance... then gradually bring it closer until you are looking at one detail of it. Make the colour change once, twice and three times. Make it grow larger and larger. Make it grow is gigantic. Make it shrink... continue shrinking it until it disappears. Then make it reappear in its original form.

Use simple objects at first then gradually progress to more complex ones. Of course it is necessary to have before you do this sort of mental manipulation.

exercise Articulating Imaginary Mechanisms Obtain a simple mechanism or puzzle (see illus.) which dismantles into 4 or 5 parts. Study it carefully in all ways. Dismantle it slowly considering each part and its relationship to the whole.

(see illus.) ?

Put the thing away and sit with eyes closed and bring the mechanism to mind. (If this is not possible with great clarity go back to studying it again). Mentally dismantle it and put it back together again. As you do his be aware of the functions of each part.

Repeat this process of studying the reality and then reconstructing the visual memory of that study mentally.

Continue this exercise with mechanisms of gradually increasing complexity.

exercise Sound Imaging Tunes You know how you can 'hear' tunes going around in your head.... there always seems to be a handy tune to whistle as you saunter along.

Using this phenomena think of a tune but don't sing it out loud. Allow it to go around in your head for long enough for the tune to 'catch'. Then follow it with another. Pause. Now sing, whistle or hum the first tune you thought of, followed by the second.

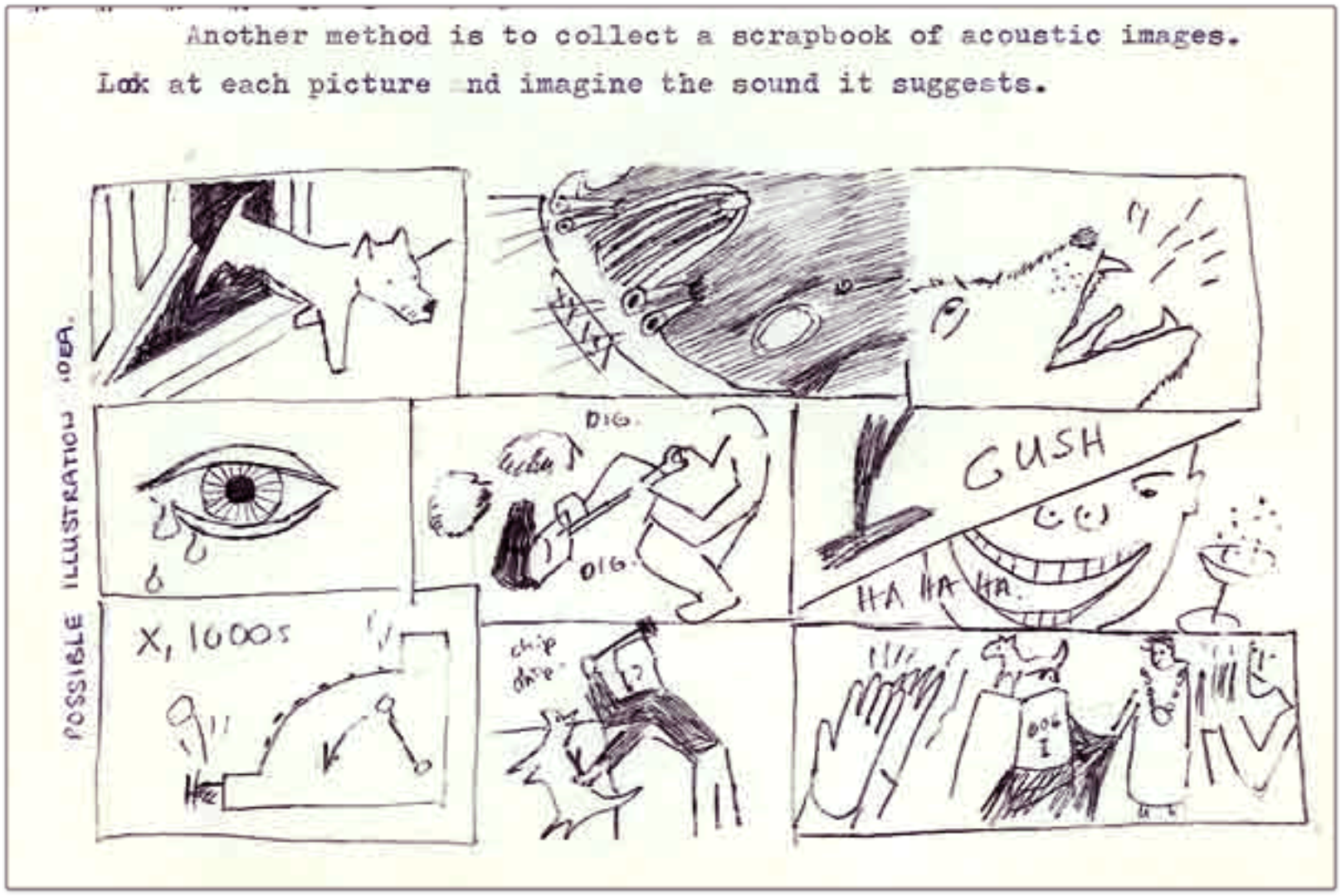
When you can do this try thinking of three consecutive tunes before you pause and sing them aloud. Gradually increase the number of tunes you can bring to mind and then sing.

exercise Sounds Story Write a story or draw a comic which comprises a sequence of events having a sound as their main quality. It may be a story that makes narrative sense or just an abstract sequence of sounds represented by words or drawings.

The story may be read out or looked at. Pauses should be made so listeners can give full reign to their sound imaging faculties.

Another method is to collect a scrapbook of acoustic images. Look at each picture and imagine the sound it suggests.

exercise Imaging Sound Environment At first choose an environment with a complex but steady sound character such as a busy road, bus, bottling factory (motors and machines form an ideal basis). Listen carefully to all the component sounds. Mimicry to be encouraged. Finally listen to the overall effect.



Away from the sound source, preferably in a very quiet place, conjure up the sounds you heard, in your own head. Are you able to imagine each component sound plus the general effect?

When you can do this this try it with sound environments in which sounds are are less repetitive. e.g. a country road.

exercise: Touch Imaging Tour Sit in an armchair with eyes closed and take an imaginary blindfold tour of your house touching surfaces and objects taking particular note of the different textures. Opening your eyes, make the same tour in reality as you imagined. Remember the imagined texture before you touch for real. How close was the reality to your imagined texture?

exercise Touch Imaging Texture Collect a range of material squares of widely differing textures. e.g. PVC, Fur, silk, hessian, net, wool.

Touch them and then do an action replay with your 'minds hand'. Touch 3 in a row'. Pause. Then mentally replay each texture you touched, in the same order. As it becomes easier to re-experience each texture early in the mind, try 4, 5 and 6 in a row.

Try a series of textures which are more similar and less contrasting.

exercise Touching Fantasy Perhaps using the Waking DreamsTechnique create a fantasy situation for yourself to explore. This may be a castle, Beduin tent, spacecraft, penthouse suite or whatever. In the fantasy you put a blindfold over your 'minds eye' and set, of to explore the textures of your imagined environment.

exercise Taste/Smell Imaging Select the name of a food or flower. Write down your choice. Shut your eyes and imagine the smell and taste. If the sensation imaged floods the mind with piquant detail and your mouth waters, tick your choice and write down another. If, however, you are unable to imagine the appropriate sensation put a cross by your choice and continue.

Later seek out the actual objects whose names are marked by a cross in your list. Re-experience the taste/smell sensation with a mind to capturing it.

exercise Hot and Cold Imaging Take an imaginary blindfold walk around your own house or flat. Touch things as you go and notice the temperature of things; how wood is 'warmer' than metal, how it feels when you walk open into a patch of sunlight, open the 'fridge door, go close to a light bulb, pick up toast, open a window, notice a draft, get under the duvet, notice a place on the floor were the dog was laying a few moments ago, the line of the hot water pipe under the plaster, and so on.

If you cannot imagine this vividly... actually do the walk and then sit down and run through it in your mind. Repeat this real feel/image rerun until the sensations become a part of your imaging vocabulary.

exercise Kinaesthetic Imaging (Muscles and balance) When watching an exciting dance performance or sport match we respond to what we are seeing with tiny muscular movements in sympathy with the movements of the players. This phenomena is called the 'kinaesthetic response' and will give us an exhilaration which is the shared pleasure of balletomanes and football fans.

Allow this kinaesthetic response full reign next time you are a spectator at some exposition of movement. Allow yourself to identify with a player you like and flow along with it. Be right THERE with every balance, swivel, collision; with every leap, fall, kick and glance.

After the event find some time in which you. can spend ten minutes alone. Close your eyes and relive the experience. Try to FEEL the main actions as vividly as possible. Allow your body the freedom to identify with the movements that have been seen and to reproduce them in miniature. Aim to gradually increase the possibility of transferring yourself into the body of a performer... this means imaging all the movements as if you were actually doing them.

Perhaps you will remember only general vague impressions at first but, if you persist, then the details will come with practice.

exercise Moving Imaging (Muscles and balance) Sit, relax and close eyes. Imagine yourself doing some physical activity. It might be a job around the house like fixing the gutter, or it might be a sequence of Yoga or Tai Chi. Concentrate on what the movements feel like.

Start off with short, simple sequences and work up to long, complex tasks. Feel the effort required to do different actions. Be aware of any counter-balance necessary.

Physical tasks may be practiced in the imagination before actually doing anything. Dancers will often learn to image a sequence of steps before they do it.

Try 30 imagined press-ups or a jog around the park.

When this movement imaging faculty is working well you can even experience doing things that are actually impossible or dangerous.

exercise Transformations - Complex Imaging Control Decide on a scene and a change that could be brought about within it. Then imagine the scene and bring about the planned changes. A couple of examples will make things clear;

1. You imagine an empty street... gradually it fills with parked cars. You see and hear each car approach and manoeuvre into a parking place, and the driver leave. Notice the colour, make and type of the vehicle. Whats the weather like? Can you deal with two or three motors arriving at once? (You'll have to be relaxed to do that or rather let it happen).

2. You vividly imagine a face. Watch the hair change; a beard might grow, be cut back and finally be trimmed into a small moustache. Hair might grow very long, be tied cut and permed in ringlets or brushed bouffant, dyed a different colour, lacquered, tied in a pony tail and then cut short and finally shaved off

The face can be felt and smelled as well as seen.

Now write your own scenario...

Note: The changes are pre-planned to guard against this exercise decomposing into idle day dreaming.

exercise Surreal Creations Imagine objects relating to each other as they never do in reality. Defy social conventions and physical laws. Allow objects qualities and powers that are in reality alien to them. Make a list; illustrate it with drawings or collages, make your own surreal ideas book. Don't get put-off by all the old surrealist cliches and awkward juxtapositions that may come up at first.

Persist for original results.

INTUITION EXERCISES

exercise Positive Frame of Mind A

Spend a week pushing yourself to notice the positive aspects of people and places you would not normally exude enthusiasm towards. Each day go up to someone and fearlessly compliment them on some positive quality you have noticed. Repeat this 'seeing positive' week occasionally until the practice becomes a permanent habit. Once you have the knack of always taking a positive direction or viewpoint it won't seem such an effort.

exercise Positive Frame of Mind B

Write out a testimonial to some quality you have enjoyed in yourself in the last week. Having difficulty? O.K. Try this way... write down something positive about yourself, the smallest thing will do. Expand it with examples and anecdotes. If you get stuck not remembering anything, don't stop... fantasise. It's better to have a positive fantasy than to be stuck feeling glum - and it may even make you laugh. Repeat weekly at a set time until your notebook, and your head, is filled with well you are doing (when everything you have had to deal with is taken into account).

exercise Positive Frame of mind C

Negative events must be seen as learning experiences. Choose an negative event and see all its constructive aspects. Take a sheet of paper. At the top write a title for the bad event. Then below make a list of all possible positive aspects that ensued or might have ensued. Let you imagination run riot.

There is always some value in the troublesome. It is of prime importance that this is brought to the fore if intuition is to work well.

exercise Positive Frame of Mind D

Each evening as you go to bed prepare some positive thought with which to begin the next day. Make a collection of such pleasant and inspiring thoughts. Keep it as a direction through the day. Any suspicion of melancholy should be combatted with reference to the thought. Such positive directions can be associated with an amulet or 'charm' which will act as a constant reminder of the 'realness' of that which is without substance.

exercise Positive Frame of Mind E

On meeting another person be sure to point out something worthy of notice. Ideally something about them. Then go on to tell them something pleasing that happened recently and encourage them to do the same.

As I have noted in the Memory section it is the first impressions (and parting shots) that are most memorable. Starting a meeting on such a positive note will effect the subsequent pattern of events out of all proportion to the effort that it requires.

exercise Positive Frame of Mind F

Stand back and behold your life. Take a day off. Write the story of the last year in the third person. Be a ruthless, but not negative or pessimistic, documenter. Reread it and then write it again in a more positive, insightful or useful way. Then leave it for a week or so and coming back to it read it as if you were a critic out to review and analyse the performance of a dear friend.

Make notes.

exercise Information Saturation

The area in which you need intuitive insight must be looked at from all angles and with all senses. Interact as fully as you are able with the subject.

Select a defined area of wall or pin-board as your centre of operation. Pin up a list of approaches to your interest. Make a timetable perhaps. Find illustrations and put them up. Decorate the 'centre of operations' for its own sake. Concentrate on making this area lively rather than trying to hard to 'solving problems'.

Take any excuses to make visits. Arrange to meet old codgers who did it first. Ask museum curators, and continue to amass relevant data and other things that take your fancy at the centre of operation. Sometimes let yourself wander off the subject. Look through a magazine. This light focus with lots of energy is just what intuition needs to come up with brilliant ideas.

exercise Identification of Your Own Subjective Position

It is a matter of getting to know yourself and the origin of your opinions and feelings in the events of your past. Becoming aware of your own history and the conditions in which you developed.

Look at your lifestory in detail to find areas in which emotion is stirred; in which you have strong views that have never been carefully thought through. The best way to do this is to make a pact with someone to exchange life stories in great detail. Keep to one lifestory for at least half an hour at a time. The person not telling hir story should ask questions and be supportive but refrain from telling similar stories from hir own life.

If this isn't possible write or draw a cartoon-strip of your story illustrated with photo-snaps and other evidences. Be sure to answer the following key questions and all their implications. Having identified your peer groups it is a good strategy to spend time with what you like and then what you dislike.

Key Questions

1. What class are your parents? What class or life style were you brought up and schooled in?
2. What race(s) are your parents (or guardians)? What part did different cultures play in your upbringing?
3. How has your gender conditioning influenced you? How do you relate or identify with any gender stereotypes?
4. What special or minority groups are you, or were you, part of? e.g. homosexual. disabled, artist.
5. How did religion play a part in your upbringing?
6. How were you treated as a child?
7. Did you experience any traumatic or life changing events not covered by the above questions?

Each group has its particular hurts and its rigidities as well as values and culture to be proud of.

exercise Improvisation with Visuals Conventional 'artistic' materials are not allowed. What can you find around and about that can be used to make... a picture? a sculpture? a hat? Rubbish is a good and is readily available. Industrial waste material can be especially good. Things from the jumble sale or charity shop.

If you have an idea this will direct your search for materials. If you have no ideas... look for materials and the materials will suggest things. Be topsy turvy. Be messy with clean materials. Be meticulous with filth. e.g. Draw local scenes on scrap paper with burnt sticks; make a public exhibition. Or dream up or copy a design for a head dress. Then make it with materials that are to hand. Be inventive... leaves might replace feathers, milk bottle tops medals.

Visit the local rubbish tip. Factory dustbins. Middle class skips. Pile up your scavenged materials in the middle of your room and set to work to fill the walls with your creations. The secret is to get stuck in; its no good holding back looking puzzled. Bend it, turn it over, fit it together, play with it, tie it up... suddenly some coherence becomes evident. An idea or just a sense of something. The junk materials take on a new sense of presence or identity.

exercise Visual improvisation 2 Collect a dozen or so objects or materials) that you like but that have been thrown away or are conventionally valueless.

Bring these objects together in a box or room and consider them together. This consideration might include listing all the associations these objects have for you. Observe them all closely from every angle. 'What does it remind you of from this angle?'

How could you put several or all of them together to make a unified identity? Play with the many possibilities of fitting them together or arranging them in relationship to each other. Pleasing effects should be noted; but do not be satisfied with the first hint of cohesion. "Aim to make an aesthetically pleasing conglomerate after a pre decided amount of time. This may be a sculptural or fantasy object or 'anything'. Additional colour may be added to make the 'finished product'.

Intuition holds the key to our aesthetic judgement and concepts of 'creativity'.

exercise Drawing improvisation You need a wad of blank paper and a good drawing implement.

Allow your hand to draw some ambiguous and perhaps amorphous shape of its own. Don't think about it. Then start casually moulding the shape on impulse. Don't care a fig about results. Work quickly giving full responsibility to the hand. As soon as the sheet bores or frustrates you .. try another.

If after five minutes or five sheets nothing of any interest has occurred postpone the exercise and do something else. You may have to do several sessions like this before something happens. (Some may recognise this technique as a form of the much maligned peripheral activity of 'doodling'.)

exercise Sounds improvisation Without any instruments; unless you call a pair of shoes an instrument. Begin by spending an hour or more compiling a vocabulary of sounds. Try for range and variety. Find out what's possible.

Begin playing with these sounds. with a real sense of the utter importance of what you are doing. (After all it's your time in your life...) Stay open to ambient sounds. Produce only what is needed. Produce whatever you want. Look ahead. Remember what you are doing. Forget yourself. Be ruthless.

Note: This may be difficult to do because letting yourself go lays you open to ridicule and abuse. Find trusted company who can listen without expectations. On this level of doing there are no aesthetic scales of Standards. All that is necessary is to open yourself up. Letting go whilst remaining in control and sensitive.

exercise Intuitive Massage Everything is allowed: except the recipients discomfort! Don't allow hir to get cold. Don't tickle, dig, punch or pinch.

'Listen' to the person you are massaging - not just to what they are saying, but listen to their body with your fingers and palms. The you must tune in to the person psychic state and do whatever seems right. Invent the strokes and finger presses and knuckle kneading as an empathic response. Keep in touch with your subject.

Much emphasis should be given to the reassuring placement of hands on the body and and to the beneficial effect of simple touching. Rhythm and variety of speed, different aromatic oils, hot water bottles, pillows for support. different textures of cloth and glove can make such a massage as rich an experience as a piece of music.

Music is in fact a good accompaniment.

exercise Mime and Movement Improvisation 'Split up into pairs. One person in each pair talks to her partner for five minutes. Decide beforehand what is going to be the topic, something like 'what happened from the time you got up this morning until now', The other person says nothing but gives attention. Change over after five minutes.

The second stage is the same process but miming or acting out the experience instead of talking. Take about seven minutes each this time.

The third stage is to take the essence of the experience picking from things that have come up the previous two times, and to improvise in movement for perhaps ten minutes each. The person giving attention acts as an external focus for the people working.

Discus afterwards.'

Emilyn Claid IMPROVISATION, New Dance Mag #6. Spring '78.

exercise Automatic Writing Write the first absurd or otherwise phrase comes into your head. Then stop. Look out the window. Read the phrase you have written, then write the first thing that comes into your head, to follow the first phrase. As soon as you pause to think and consider..,stop. Look away. Reread and continue.

If you have prepared yourself sufficiently so that this process happens unselfconsciously the result may be weird and seem disassociated from your own self.

Even better done with two people each with typewriters. Both simultaneously type out a paragraph about anything that comes into their heads. They then exchange typewriters, read each others and continue typing on from where the other person left off.

In this way stories grow in unpredictable and exciting ways. The previous paragraph will spark off an immediate and original response.

exercise Story Telling The essence of good story telling is rich and detailed descriptions and strong characterisations within a succession of events.

Explanation is not necessary and can be supplied by the listener. The way to start is just to say whatever comes to mind however cliched and witless.

Practice regularly every day.

A young child is an ideal audience as most children love stories told to them face to face however ridiculous and disjointed. Topics may suggest themselves in preliminary conversation with your audience.

The stories will be more effective if they find ways to involve the listeners. This is much more important than beginning, middle and end. Regularity of practice will develop a style and probably some themes you will enjoy repeating and embellishing, probably on demand from your audience.

exercise Taste and Smell You have been too busy to get food in. Some friends arrive. This is the perfect setting in which to do this exercise. A meal can usually be made with scraps and bits not normally considered in routine cuisine. In the larder find those few dried beans and the quarter full bag of flour. Those few vegetable in the garden of that empty house down the road. Sorrel from the wasteland. Houseplants? Nasturtium leaves make a tangy salad.

Scour your house and neighbourhood for anything edible. Put all your loot onto a table. Choose some items that need cooking longest and start to prepare them. As soon as you actually start ideas for combinations of ingredients will start coming to you. Style and presentation are as important as taste and smell so don’t let them be forgotten. Proceed step by step carefully tasting at each juncture, to ensure you have taken a wise direction.

exercise Feed Ritual Select an aim in your life that requires a degree of randomness or luck to get it to occur. Eg. getting a job, meeting the right person, finding money in the street.

Spend a little while (eg. ten minutes) in a garden or local park selecting a twig and a leaf. This is a meditative preparation so give full measure to the selection of the twig and leaf.

Now, thinking of your aim, break twig - drop leaf. Then walk away and get on with your business. (Requires falth in the of operation of interrelatedness of all things and the subtlety which the intuition is capable).

exercise Premonition (as a use of intuition)

1. Whenever you receive a letter - guess who has sent it before seeing it if possible. You will probably be wrong at first. But if you persevere with this practice in a lighthearted way, without a false feeling of failure you will probably find your premonitory accuracy increasing.

2. The same can be done with telephone calls. As the telephone rings allow a couple o! rings for an image to rise up in your mind. This image will give you the clue to who is calling. Always trust the very first image that arises.

3. Apparently many people are able, with preparation, to do Nostradamus type predictions for the future and gain a 50% or more accuracy.

4. Tarot, Numerology etc are all useful practice for the intuition.

exercise Tapping Group Intuition

> "Synectics (meaning the joining together of different and apparently irrelevant elements) aimed at stimulating the rate and complexity of combination (of ideas) through use of metaphor, symbol and fantasy." Frank Barron 1958 p144

A group technique in which a problem or question is understood by all as the subject. The group then throws in ideas all around the subject area. Lunacy is encouraged as it is often in the wake of an absurdity that the most original ideas arise. During the madness seemingly irrelevant material should not be suppressed. In fact the aim should be to, drop inhibitions and conventions that will normally keep our thoughts to the straight and narrow. Group trust is essential. Do not expect fantastic results from your first sessions.

Everything that comes up is taken down on tape or by shorthand. Before the group meets again a concise typescript is made and duplicated so each person can have a copy. The original is kept for reference. Discussion of the transcript takes place, new ideas arise and a more serious critical appraisal of material takes place.

REASONING EXERCISES

exercise Key Checklist of Thinking Errors

An annotated list of 15 common sources of reasoning error followed by a four exercises as examples of ways in which they may be put to work.

thinking error 1 DEFINITION If we are to reason using everyday language we must be clear about exactly what the words we are using refer to. Everyone attaches slightly different meanings to the words they use depending on their particular experience.

This is not so much of a problem with concrete noun concepts, but is commonly a source of confusion with more abstract concepts. As ideas become more abstract the connection to our experienced knowledge becomes more distant. Words like 'freedom' and 'democracy' are worthless unless brought to earth by tangible definition. How many people are tortured? How is the media controlled?

Other descriptive words require qualification if they are not to be too vague. Words like progressive, beautiful, bad or nice.

thinking error 2 AMBIGUITY Referring only to a 'dark brown table' can be worthless if the object is being offered for sale. Does brown indicate mahogany or thick paint covering shoddy construction? This shows an ambiguity caused by using a word that is not precise enough for the context.

In other cases and especially in English we find a single word that has two quite different meanings. These meanings can even be contradictory as in 'to go fast' or 'to stand fast'.

In this type of example definition is provided by the context. Other cases of ambiguity may be more subtle and these are more likely to cause errors in argument. If a word is causing confusion it is best to restate the problem in different words.

thinking error 3 INCORRECT BASIC IDEAS It is useful to think of this on two levels. That of our assumptions and that of our basic propositions in a particular piece of thinking.

A. Assumptions - These are the unproven intuitions, beliefs and so-called instincts that underlie our thought structure as a whole. Most people are not aware of the assumptions upon which they act - assumptions are usually tied up with our feelings and early experiences and inherited cultural norms.

Philosophers have identified fundamental assumptions that we all share such as the consistency of the universe and the principle of induction.

Brilliant thinking on unchecked assumptions can lead to disasters. (Thinking particularly about some of the highly paid people who act as governmental advisors).

B. Basic propositions - Any rational thought process starts from certain basic propositions and from these we may deduce an outcome. This outcome will vary from a definite conclusion to more questions. To make this process clear we must first articulate our basic propositions in full. Then we should check they are factually correct, or to what extent they are supported. Are the supportive references reliable? On what authority are they based? What interests might the authority be acting on behalf of?

We must work back from any opinion to find the propositions on which it is based. We check these and sort out the factual, from the emotional, from the intuitive. Are the facts reliable?

What real conditions are behind the emotional feeling? Express the part that is intuitively judged/evaluated as clearly as possible.

This process is invaluable in any area in which you are working or otherwise involved. It allows you to become articulate and clear and will make any subsequent programme of action much more effective.

thinking error 4 CAUSE OR ANTECEDENT Sometimes cause is separated from effect by considerable space or time. The connection between the two may not be obvious. In such cases another factor that is closer in space or time may appear to be the cause. e.g. In prehistoric times, and in come cultures more recently, the causal connection between intercourse and childbearing was not realised. Sometimes causal connections are implied in speech: "After I had taken the medicine my pain went way". But we cannot be certain that the chemical properties of the medicine were the cause of the pain ending.

The point is that the cause is not always the most obvious factor. Apparent causes need to be investigated until actual concrete relations are ascertained.

thinking error 5 REAL ATTRIBUTE OR ASSOCIATION? It is important to be clear about the real 'characteristics' of an object or event as distinct from its associations.

I recently read a statistical report from Scotland which lamented the lack of truth in the stereo~ype of the tight-fisted or thrifty Scot. Statistics showed the Scots to be squandering their income at a rate that caused concern in the author of the report.

Stereotypes are bad enough simply because they generalise about a people who are in fact all different. They are even more absurd when it is likely that the steroetype is false.

Unwarranted associations that appear as real characteristics are most pernicious. Working class people are said to be dirty and thick. Although put like this, it is patently absurd this conditioning, in many guises, plays an important part in class division.

Sometimes we are interested in the associations of an object or event rather than its real characteristics. It is the associations of a Star of David medalion that are important not its physical characteristics. The same is true of most ritual.

thinking error 6 SPURIOUS GENERALISATION Sweeping generalisations are one of the most common weaknesses of everyday reasoning.

Incorrect generalisations are usually made on the basis of inadequate evidence. Observation of a few cases, however vivid, do not mean the rest of the category are similar. e.g. On entering a port of a country you have never before visited you may 'get an impression of the country'. You may see many cars for instance. Then on another trip you travel further inland and find a completely different scene with very few cars.

Other generalisations are misleading in that they do not give any idea of the number of exceptions to be expected. Generalisations that ar not all-encompassing should be qualified.

Test for Spurious Generalisation

a. Were there enough observations made? (From different viewpoints in sufficient locations).

b. Are the instances recorded representative?

c. Were they recorded objectively?

d. Was a thorough search for exceptions made?

Note: It is possible to make the opposite mistake - assuming one case when there are more than one. Thinking you are the only person feeling so-and-so whereas there are usually many others feeling the same but not communicating about it. (Common in areas of taboo e.g. men talking to each other about their emotional life)

thinking error 7 CLASSIFICATION Classification systems will attempt to make a 'universal' division of the world but this is never possible from one place in space and time. Particular classification systems always show some things more clearly than others. Essentially classification is a gross simplification of the world in which individual things are likely to share a range of similarities with other things. But classification is useful because it is orderly allowing us to find things, and because it helps us understand underlying structure and pattern.

Some classifications become more real than the world they are dealing with. Classification is only ever an temporary artificial for us to understand the world not a grid through which we must live.

When we look for something in, for example, a library index, we must remember we are looking through a classification grid made by another fallable human with a specific viewpoint and set of interests. A disadvantage of classification can be seen on the most basic level in the verbal classifications of polar opposites. Good/bad, working class/middle class, normal/abnormal, sane/mad, clever/stupid. These polarities simplify a reality that is spread out on a perhaps multi-dimensional continuum and not divided into two opposed categories.

The most complete and flexible classification system is of course language. And yet language itself will reflect the bias of those who are most culturally dominant. So published English will, in the main, reflect a male, middle class, middle aged, white, able-bodied view of the world.

thinking error 8 EMOTION There is a very strong tendency to formalise one's early emotional experience in later conscious philisophical beliefs or idealogy.

We will try to use reason to create a plausible explanation for our (basically irrational) feelings. This is a most important point because it is such an insidious and profound process. I.e. it is difficult to be aware of such sub-conscious steering. Our whole life will have been arranged in accordance with out emotional requirements so our vested interest in this 'not being challenged' is high.

In smaller ways emotion plays a great part in confusing rational thought process. We may cooly use emotive terms, 'my country, right or wrong' to move people emotionally. We may also be dramaticaly emotional 'I'd like to kill you' etc.

Learning to differentiate between feelings and rational thought and responding to each separately in an appropriate way, is one of the most useful things we can do to think more clearly in the place most people get bogged down (see emotion). Rational thought will almost certainly bring us up against our emotions and those of others. A change of ideas in some circumstances may mean losing friends and a secure job or discarding a lifetimes work. Unless we know how to deal with our feelings separately, we will find only the easy options are open to us in life and we will probably 'rationalise' our choices rather than admit our fears and face realities.

A common emotional block is 'fear of failure'. We are conditioned to success being the only acceptable outcome and to err or fail is equated with humiliation, and yet trial and error is a necessary part of the learning process. Only if we overcome our fear of failure can we move into new ground.

thinking error 9 PERSONAL EXPERIENCE Personal experience is very influential compared with second-hand knowledge (e.g. from books). It is perhaps not surprising that we give knowledge gained by direct experience a status of 'Law'.

Personal experience is the most vivid and rich form of knowledge. At the same time it must be accepted as unreliable whilst unsubstantiated from other sources. Perceptual errors of magnitude and recognition are common. (link senses section). Generalisation on the basis of too small a sample is the usual error made on the basis of personal experience.

Personal experience is of great value but should be checked against 'third party' sources. On the other hand a knowledge gained from books and other media is greatly enriched by personal investigation.

thinking error 10 VALUE AND OPINION We must be clear how our values are formed. There is the judgement based on 'objective' evidences, measurements etc. and then there is the intuitive evaluation. This latter may be based on less certain evidences and references, personal experience, association and emotional bonds. If we are arrogant with our opinions we must be sure our values are formed from reliable sources.

The best way to check opinions based on experience is by extensive sharing with your peer group. Hearing many other people express a similar feeling can turn what seemed like personal idiosyncrasy or neurosis into a political demand.

Of course group opinions may be held in error. e.g. a few hundred years ago everybody believed the world was flat. But if a lot of people share a strong feellng or opinion you can be sure there is a real social condition behind it even if the conclusion held is incorrect. E.g. the appeal of racism to provide a scapegoat diverts thinking from other genuine grievances that require recognition like white working class oppression.

thinking error 11 CONTEXT It is well accepted now that many 'personal problems' that people suffer have larger social causes. By examining the person we may discover little. It is only by looking at a wider context that we discover the cause of the problem.

Ecology has demonstrated particularly well the interrelation of small events with the larger world. If a problem cannot be solved as it presents itself, perhaps you have not fully appreciated the implications of its context.

Getting this overview may not be more difficult than reading a carefully chosen book, taking a walk or listening to someone with inside information for an hour or two.

thinking error 12 VIEWPOINT In thinking about complex phenomena viewpoint is most important. The more viewpoints from which we study phenomena the more aspects will be revealed.

When stuck thinking about a 'problem' taking another viewpoint is always a good move.

Disagreement is often caused by differences in the viewpoint which may make the same source of information appear radically different. It is important to start any debate by stating your point of view with as much detail and passion as possible and then to listen to other points of view.

Then if it seems useful develop bridging ideas.

A single viewpoint is inevitably limited.

thinking error 13 THE PURITY OF SCIENCE An absurdity is built into our society through the artificial division of people into manual and intellectual and then later of the so-called intellectual field into arts or sciences.

These divisions are artificial and should not be treated as if they represent real differences. A car mechanic will go through a perfect model of rational analysis when finding a mechanical fault in a vehicle. In fact a good mechanic must have as logical a mind as a scientist. The practical confirms the abstract and the intuition and imagination complement reason and 'scientific' logic.

Rationality is not healthy when it is raised up as an isolated ability. Its co-existence with intuition, imagination and action must be accepted.

thinking error 14 FALSE VALIDITY

FALLACY: Any argument which decieves us, by seeming to prove what it does not really prove.

LOGIC: Rules underlying arguments which, when followed, Will ensure that only true conclusions are drawn from true premises.

a. A logically valid argument is used to imply the truth of one

of its premises. "The validity of a syllogism is quite independent of the truth of its premises. 'I have sent for you my dear ducks,' said the worthy Mrs Bond, 'to enquire with what sauce you would like to be eaten?'

'But we don't want to be killed.' cried the Ducks.

'You are wandering from the point.' was Mrs Bonds perfectly

logical reply.

Lewis Carroll preface to third edition Euclid and His Modern Rivals

b. True premises are used to suggest a false conclusion. e.g. I saw it in the newspaper. All newspapers tell lies. Conclusion (false) It was a lie. True conclusion; It might be a lie.

Some ties are not artistic. I admire anything artistic. Conclusion (false) There are some ties I do not admire.

If A is C and B is C, then it is a false conclusion that A = B. A and B share the same characteristic but are equal only in that respect.

c. Conclusions that are self-evidently true can suggest a valid argument. e.g. No thieves are honest. Some dishonest people are found out. Conclusion (false) Some thieves are found out. Although it happens to be true that some thieves are found out, it cannot be deduced from the stated premises.

d. False Causality: If B follows A then A is often taken as the cause of B. If you go to Harley Street for a cure and afterwards get better this may suggest, but does not prove, that your recovery was due to the specialist's ministration.

e. Irrelevant Application: Validly drawn conclusions are often then reapplied to material which is not part of the origional premises. The reaction of guinea pigs to different coloured light is used to imply that there is a similar human response.

f. False Induction: By giving a plethora of substantive detail and avoiding the mention of contradictory instances. e.g. attacks on Western medicine will instance all the times it goes wrong without providing the same space to mention its considerable successes.

thinking error 15 ANALOGY An analogy is used to describe (or explain) something unknown by reference to something known that has similar characteristics.

"Presumptive reasoning is based on the assumption that if things have some similar attributes their other attributes will be similar" Shorter Oxford Dictionary.

Analogies tend to run away with themselves. They become interesting in themselves as poetry or imagery and begin to imply much more than their circumscribed purpose. This is commonly noted in religions where helpful analogies tend to become blind articles of faith.

The limits of any analogy should be made clear. If we learn that atoms are 'like billiard balls' it should be made clear exactly in what ways they are to be imaged as 'like billiard balls'.

The temptation to overuse a rich analogy should be avoided. There tends to he a confusing transference of properties between analogy and subject. As analogies develop always check with reality that all attributes compared are equivalent and there is no implication of further equivalences.

The perfect analogy is: the ratio 2:4 is equivalent to 50: X therefore ,'. X = 100

But expressed loosely as 2 is to 4 as 50 is to X - we can derive the result X = 52.

If we know a dog has a liver we might infer that a cat also has a liver; because they are similar animals. This is a useful hypothesis but not a truth until we check with reality by dissecting a dead cat.

Analogy is a powerful mode because of the minds propensity to match up similar patterns.

'Below are four exercises suggesting formal uses of the checklist above':

exercise 1. Errors of Thinking Checklist Use example A. Without too much consideration write a few pages on your current beliefs, values or whatever ...and the reasons you have for holding these positions. Then using any of the checklists comment upon your thinking and reasoning. (Conclude by summarising the strong and weak points of your opinions.)

exercise 2. Errors of Thinking Checklist Use example B. Buy an introductory pamphlet in which some group introduces their ideas or other written material that concisely argues a case. This type of thing is sometimes provided in a newspaper editorial or feature. Using the checklist criticise the reasoning. What strengths and what weakness does it have? Do you notice weaknesses not mentioned in the checklist? Summarise the argument as stated flnd your critique of it.

exercise 3. Errors of Thinking Checklist Use example C. Visit a court of law whilst a case is being defended. Follow the argument making notes of underlying a assumptions, strengths and weaknesses. Do you agree with the ruling

of the court? Could you have added extra dimensions to the case? Where was the reasoning lucid and where was there more room for doubt or even logical error.

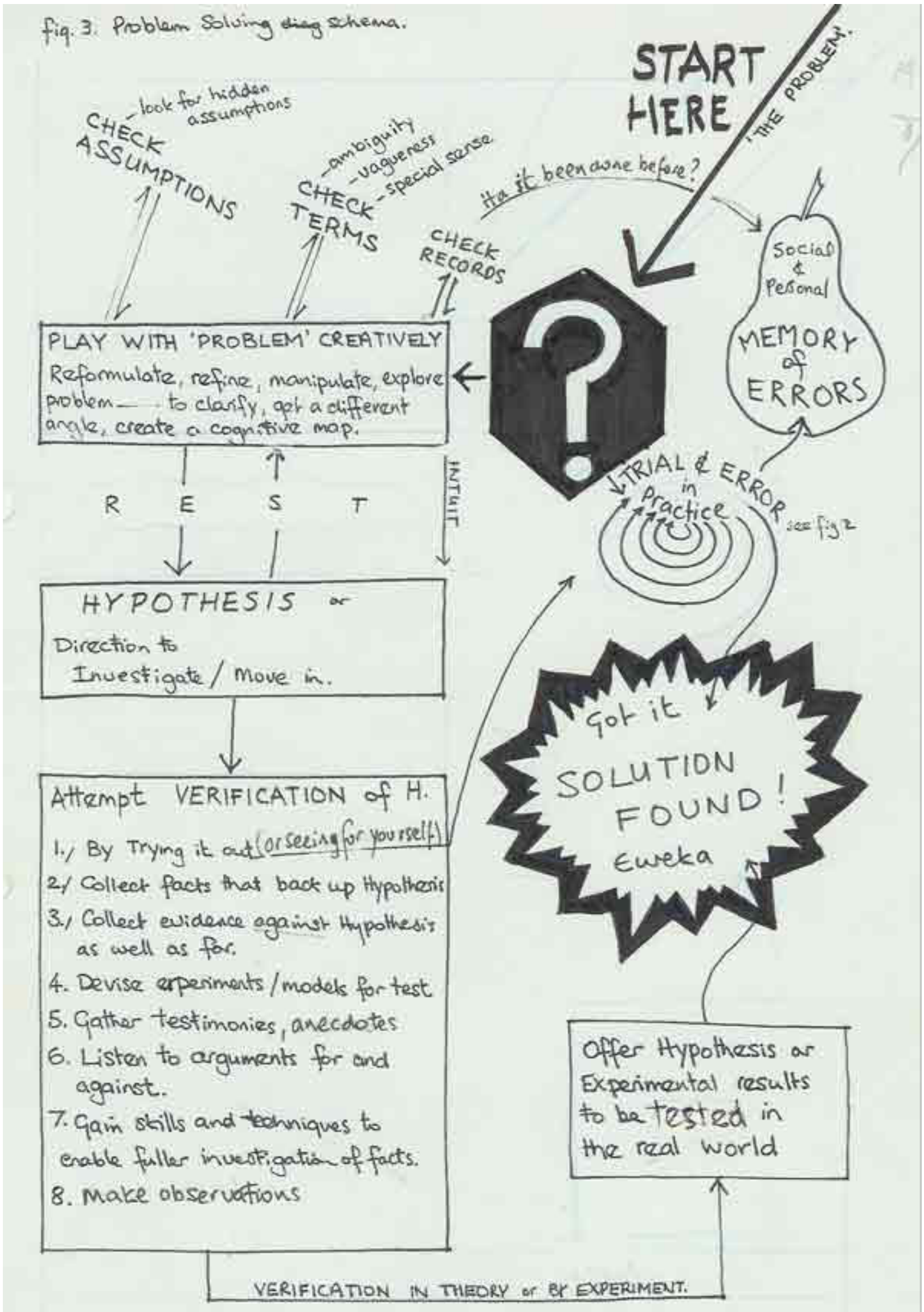
Other visits could be made to parliament and to the local debating society.

exercise 4. Errors of Thinking Checklist Use example D. Collect newspaper articles on some controvesial issue. e.g. European Union democracy, the Arms Race, cloning, immigration etc. What opinions and assumptions can you read between the lines. Are people trying to imply something they simply dare not say? What is your own likely bias in each case? What view might you hold if you were unbiased?

exercise Problem Solving Procedure

1. Select problem. Express it clearly. Then write out several different descriptions of the problem from different viewpoints. Put it in a wider context (note all solutions that arise).
2. When problem is clearly understood scan memory for all previous experiences in similar and related matters (note any solutions that arise).
3. Rest. Treat yourself to a day outing (note any solutions that arise - in passing).
4. Brainstorm solutions. If stuck ask yourself "What might the answer look like?"
5. List solutions so far. Make shortlist. Evaluate. If a few solutions stand out as equally possible list points for and against - cross out reasons that offset each other. Discuss pros and cons separately. Giving time to think through each side of a contradiction. Ask yourself, "What is the implication of this idea?" Enter into each solution imaginatively as if it is already fulfilled. Rest. Later review process and make decision.
6. If still no adequate solutions go to 'expert' advice.
7. Test solution in practice.

fig. 3. Problem Solving diag schema.



exercise Key Questions It has been said that the central task of all rational enquiry is to formulate significant questions and design ways to answer them.

Bombard the area of interest with questions, questions, questions . . .

> HOW? the manner in which, operation, process, measure...
>
> WHY? reasons, motivation, purpose...
>
> WHERE? spatial, geographical, direction, context...
>
> WHICH? definitions, names, specification, connections...
>
> WHOSE? personalities, ownership, benefit...
>
> WHAT? is to be done, nature of it, name, classify...

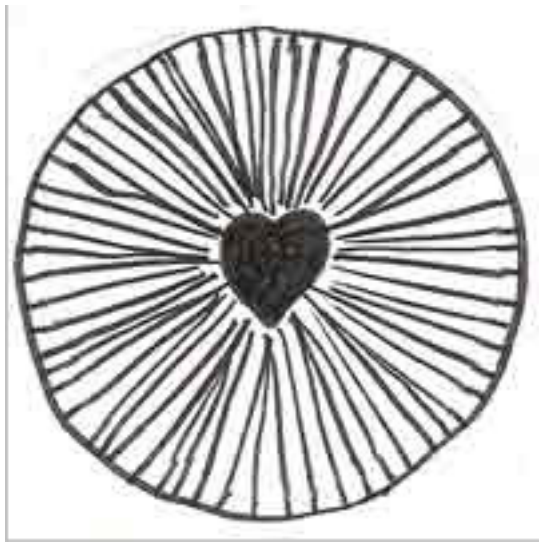
When subject is complex... separate underlying structure from illustration, decoration, detail. Perhaps sub-dividing structure and asking questions of each part.

Arrange answers in groups. Arrange groups in sequence.

We usually have a purpose that directs the course of our questioning. This purpose gives us insight into the key questions that require answers at all cost. However asking all questions opens the subject up presenting fresh and unimagined possibilities.

exercise Focusing Ritual The figure drawn below symbolises the mind turning in on itself, excluding irrelevancies and getting to the heart of the matter. Draw your own version of this diagram on a clear sheet of paper. Imagine yourself excluding irrelevancies, focusing your whole interest on one subject of attention.

When you have instilled this idea in your whole being turn to the work at hand - forgetting the exercise...



exercise Focusing Attention /Mind Control Choose three subjects which you could do with thinking about. Sit down in your favorite chair or position. Using an egg timer or alarm clock measure periods of 3 - 5 minutes. Think of the first subject intensely for three minutes. Switch to the second subject. Switch to the third subject. 3 minutes. Rest for 3 minutes. Don't worry about 'getting anywhere in the 3 minutes. Results may not be conscious and may only be evident later.

exercise Fundamental Questions It was natural for us as children to ponder such philosophical questions as;

> Where do we come from?
>
> Why is there famine and war on earth?

How can I grasp the infinity of space and time?

To what purpose am I here on earth?

Answers to such questions are often awesomely inconclusive or have implications that bring us up against disturbing feelings of powerlessness. Adults aware of this and wishing to avoid discomfort, will often give children facile nonsense in answer.

One of the most useful and exciting of the fundamental questions is to examine the value of human life, of our own life. It is only possible to do this and see the implications clearly if we can deal with the feelings that inevitably arise. If we do not, the feelings will cause the shut down of our thinking before many of the implications even come into our consciousness.

Difficult as this path appears it is the direction in which human evolution lies and is the highest application of human mental endeavor.

What use are the main actions in your life?

To what end or purpose are they designed ?

Is this 'end or purpose' a desirable component of a further end?

Follow the chain along which such questions lead you until we come to that which has value of its own account. Are your actions useful to some end that you truly value?

exercise Assumptions The project of identifying the assumptions upon which we act is a life-long one. We will find that our assumptions are based on feelings and personal experience as well the fundamental self-evident and common sense truths.

Buy the most expensive hard bound exercise book that you can afford. On the first pages write down all the assumptions that you hold that you are presently aware of. If it is difficult to start to identify your assumptions answer some of the following questions to start you off.

- What assumption do you do you have to make to believe the definition of a word in a dictionary?
- What assumptions do you make when the lights fail in your car?
- What assumptions do you make when you believe todays news headlines?
- What assumptions do you make when you see a black woman driving a Rolls Royce ?
- What assumptions do you make when you meet white men in isolated jungle?
- What assumptions do you make when you see a parson slapping their child?
- What assumptions do you make when you cast your vote in the General Election?
- What assumptions do you make when you see a man pushing a pram?
- What assumptions do you make each time you telephone someone?
- What assumption do you make when you read about St George slaying the dragon?

Subject each assumption that you write in your book to intense scrutiny. Are there further assumptions upon which this assumption is based ?

Review your list of assumptions every six months. How has the last year or so changed your values or viewpoint? Add to or amend your list as appropriate. Check the mutual consistency of your assumptions. Do some contradict each other? If so why?

exercise Thinking Practice Think aloud into an audio recorder. At first ramble on about anything at all until you become familiar enough with the situation to lose self consciousness about thinking aloud or recording yourself. This in itself may take several sessions.

Having worked through initial embarrassments it is possible to focus in various ways;

1. Choose a challenging rather than mundane topic. Don't spend time recycling old worries. Develop your thoughts about this topic over several sessions.
2. Choose a different topic each session.
4. Leave it completely free to include spontaneous stories, fantasy, images and flashes of insight.

Talk for half an hour - playback for half an hour. To start each session blurt out anything about the topic that comes into your head. Then assess what you really think.

It may help to imagine that you are addressing an enraptured or infinitely and benign audience for whom you can do no wrong.

Mark recordings worth keeping to playback at a later date. Thinking aloud forces the mind to reveal its rational processes. By recording our thinking we can become more aware of our rationality and this will also improve self confidence.

exercise Trial and Error Most new thinking come from a process of trial and error. Failure is almost essential to find new solutions. See diagram:

fig. 1.

STANDARD TRIAL & ERROR MODEL

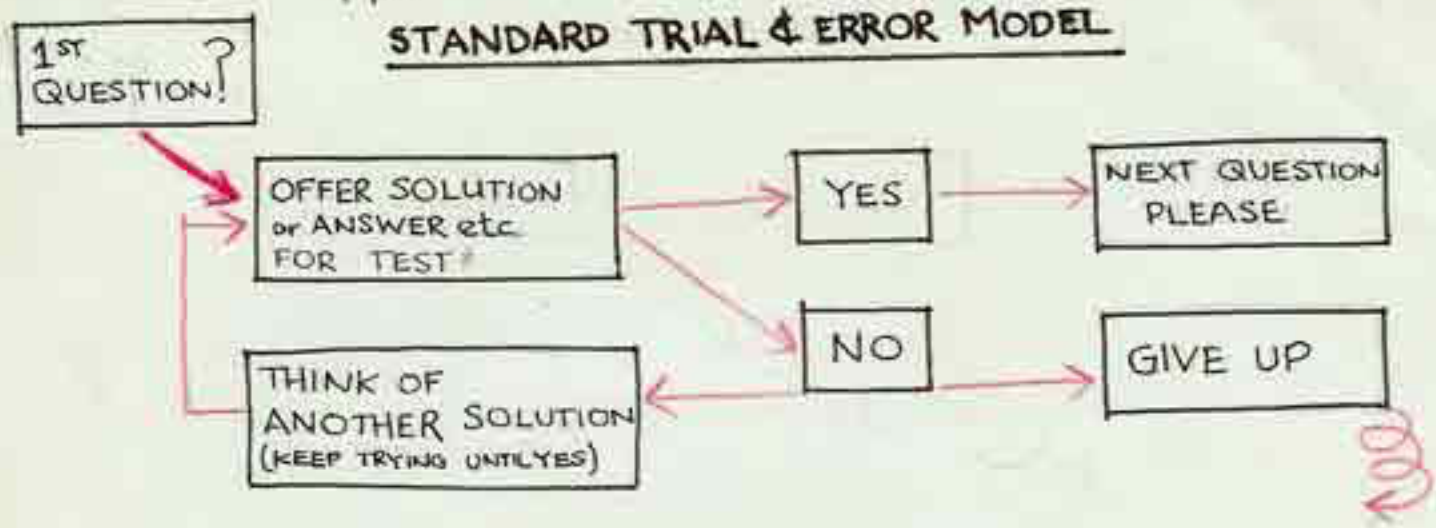
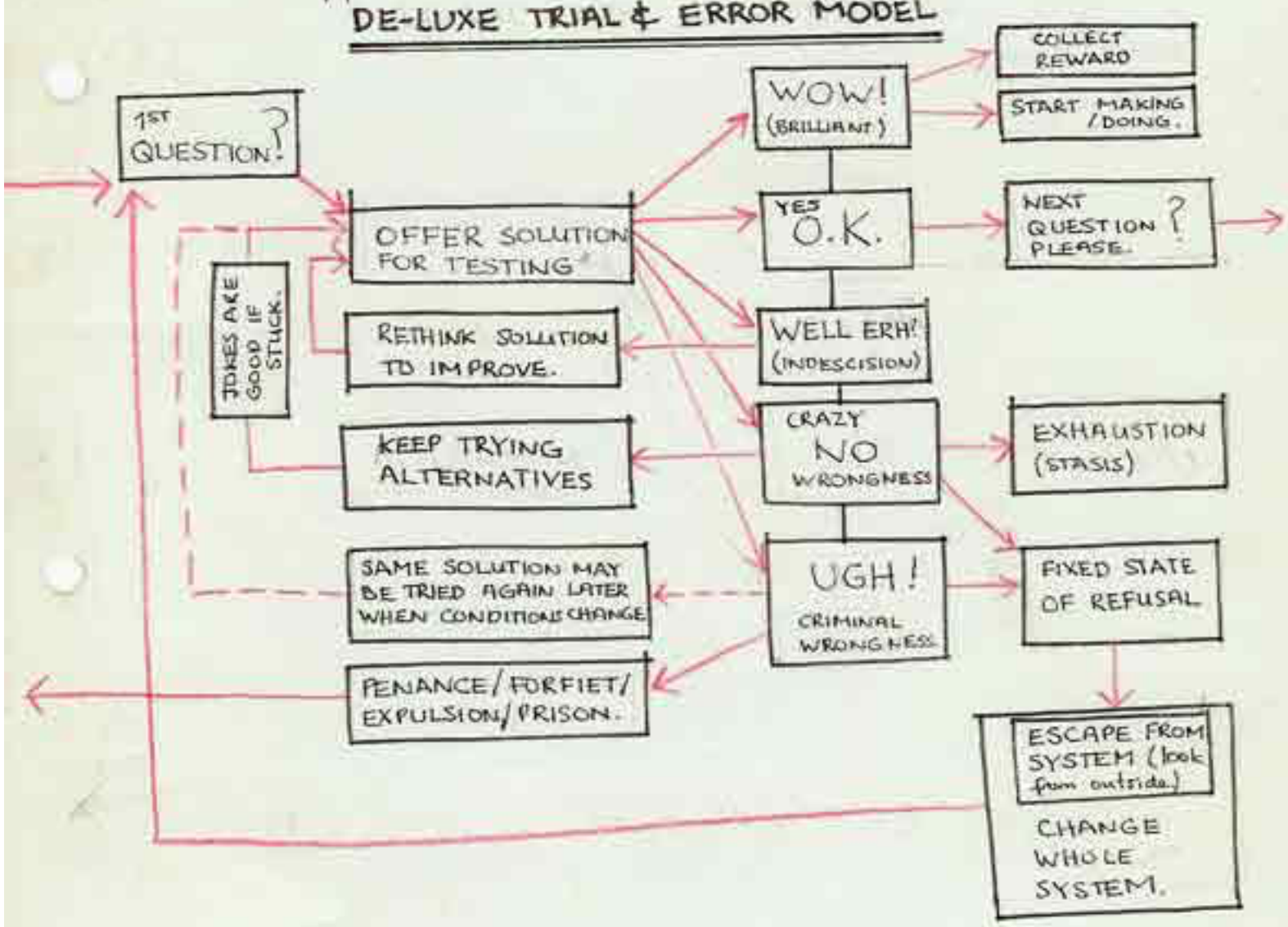


fig. 2.

DE-LUXE TRIAL & ERROR MODEL



QUESTION & ANSWER a BASIC MODE of THOUGHT.

exercise Doubt Rene Descarte's Method of Systematic Doubt

1. Doubt everything until you find the reason for not doubting it.

2. Believe nothing which you cannot see quite clearly: and distinctly to be true.

3. The only thing that is absolutely certain is your own existence (ie sensation) Expressed in the famous "I think therefor I am."

If you go far enough asking questions about the truth and validity about any piece of knowledge you will come to a level on which doubt exists.

When I was doing my 'A' level "Physics it took a prolonged interrogation over many weeks before the teacher admitted that he really had no idea in any absolute sense, what matter or energy, or more specifically electricity, was. That science only provided a relative rather than absolute answer to questions of essence.

> A. Make a list of things you have your doubts about. What are these doubts? Can you put words to them? Are they justified by any evidence you can find?
>
> B. Make a list of things you feel certain about and things that you have never doubted? Think about these things and find the area where some doubt at least exists. Search out this Achilles heel of doubt?

A doubting frame of mind slows us down makes us think more, investigate, be skeptical, ask questions Doubt brings up alternatives, generates ideas and is creative. On the other hand feeling right allows us to act immediately, generates action, decisiveness, growth and gets results... but may be rigid.

Both attitudes are useful at different times. Can you switch? The criteria is that any thinking should be effective in a particular situation. Righteousness does not allow space for broad considerations of effectiveness. On the other hand chronic doubt makes it difficult to act.

exercise Reading Facts Fast

1. OVERVIEW: This is an initial survey at speed. Using a pointer scan through everything but the main text. Look at the contents page, pictures, back cover or dust cover notes, summaries, conclusions, graphics, margin notes, italics, bold type, capitals, subheadings, quotes, tables, dates, statistics, graphs, footnotes etc. Be especially careful to use the pointer around the outlines of diagrams, and other illustrations. Aim to understand the overall structure. Is it worth reading from cover to cover? No? Then are some parts worth reading in detail?

2. PREVIEW: Now read the beginnings and ends of each chapter and scan the rest of the prose. Aim to get the gist of the argument but leapfrog the difficult bits. Key word diagram notes may help if the structure is complex. You can now begin to select what is useful to study further, criticise the content and reject parts.

3. INVIEW: Reread what you have decided Will be useful. Reread the difficult bits but still don't get bogged down. If its not clear move on regardless. Few authors will not summarise key points clearly at some stage! Mark key text and obscure passages with a light soft pencil. Make your won index on the rear fly leaf.

4. REVIEW: Re-read key text and obscure passages. Scan to make key notes. For a heavy book or area of study make a large general diagram of the overall structure and sub-diagrams for each section/topic etc.

5. SECOND REVIEW: Read notes next day and then in one week and in a month. In the first review redraw the initial key word diagram - to clarify the pattern. The subsequent reviews can be quick - a matter of 5 minutes.

Note. The above is not a rigid formula but can be varied to meet the needs of different material. If you can break the conditioning that books should be read 'properly' or not at all it can cut study time by at least 50 per cent.

exercise Writing

1. The best way to improve is to practice ... but you will need to arrange to get feedback. A sympathetic but knowledgeable friend may give you criticism and encouragement in exchange for some other service. Otherwise its all down to an evening class - or the flexible interpretation of a text book.

2. Study authors noted for their clarity e.g. in English e.g. Samuel Butler, George Orwell, Adrienne Rich. Pat Barker. Notice particularly how their sentences are constructed - and how they are limited. Look at writing in your own dialect, ethnic patois or language. Use this in preference to Oxford English wherever possible.

3. Vocabulary. As you read always note words you don't know. Look them up in a dictionary. In the next few days use them in a bit of your own writing from your own imagination. The writing may be directed by the words themselves. Writing spontaneous pieces from random vocabulary increases the inter-connectivity of the brain. This means an increased level of creativity.)

> Avoid the use of cliches and overused words. Examine your writing and make a list of words that you use too often or vaguely. The next few times you write avoid using these words. Make a short collection of popular cliches from the local press.
>
> Before tackling a new subject it is worth glancing at a glossary. You won't then have to stop every few paragraphs to look up new terms.
>
> If you use dialect or colloquial terms that your audience may not understand, provide them with your own glossary. Be proud of the language that is yours, without hiding behind it.

4. Sentences. Keep sentences short. Use the full stop. Keep to eight syllables per sentence in comics to 20 syllables per sentence in prose.

> Usually make just one assertion per sentence.
>
> See the sentence from the reader's point of view. Could it be read in a way that would make it ambiguous? Ask this question of each sentence until you correct any vague habits.
>
> For details of how to structure your writing to make the most impact. See the Eight criteria of retention (link).
>
> The 'sense' should run fluently from sentence to sentence. Again, try to see the writing from the point of view of someone reading it. Extra connecting sentences may need to be inserted. Sentences can begin with And or But.
>
> Paragraphs form natural units. Bundles of sentences.
>
> If a sentence depends on a comma, the sentence is better re-organised.

5. Organisation. Write an outline of your idea first, having organised your notes or other data. Check the ideas to see there is no confusion and you have sufficient information. The outline may be rewritten many times and data studied until you are quite sure about the clarity of your ideas. Decide on subheadings and even paragraph contents.. Although it is often a good idea to leave the outline open ended as ideas are generated in actually writing.

Depending on your skill, the subject matter and the soundness of your outline thinking, it may only be necessary to write one draft. It is common, however, to do two or three drafts. This is because the first draft will usually spark off ideas to evolve and refine your ideas. Especially when you come back to it after a few days or in discussion with a friend.

> **The Art of Becoming an Original Writer in Three Days!**
>
> “Here follows the practical prescription that I promised. Take a few sheets of paper and for 3 days in succession write down, without falsification of hypocrisy, everything that comes into your head. Write what you think of yourself, of your women, of the Turkish war, of Goethe, of the Font criminal case, of the Last Judgement, of those senior to you in authority - and when the 3 days are over you will be amazed at what novel and startling thoughts have welled up in you. That is the art of becoming an original writer in three days.” Ludwig Borne 1923

EMOTION EXERCISES

exercise Chronic Bad Feelings Many of our feelings are chronic, that is they make us feel less than brilliant about ourselves almost all the time. One tactic with chronic negative feelings is to DECIDE to pay no heed to them and to instead put our attention onto our present time life.

The mental phenomena of decision plays the major part in the direction and control of our attention. We need therefor to repeatedly make a decision that our nervousness, fear, embarrassment, deprecation or whatever, is superficial and will not effect our intelligent choices of action. Written and daily repeated decisions will probably be necessary. They may be precise or general.

- "I will not get depressed after contacting my mother - I lead my own life now".
- "The manager will not intimidate me with his innuendos - I will speak my own mind confidently at all times".
- "From this moment on I will be my true self at all times".

On top of this list what is good in your life and what you want out of life on a regular basis. This is best done as an oral exchange with a friend but writing a list is a good second best.

If a friend is depressed or otherwise sunk into negative feeling a good technique is to get them to review happy memories. This can be done in person, by phone or by email or letter. This may have to be done by asking questions about a range of subject areas that are likely to have happy memories attached. e.g. beach, sea, countryside, flowers, games, holiday, etc. It is useful if you know the persons special interests.

exercise Dealing with Sudden Strong Feelings Other feelings may come on you suddenly and unexpectedly. You get angry and fly of the handle or you feel dominated and go quiet and submissive. These situation can reoccur quite often and it can still be surprising how strong the emotion is and how unexpected it feels.

A useful technique here is to temporarily take yourself outside the situation. Leave the cause of the upset. leave the room, walk into the garden. Go out the back gate and up a nearby hill. Take a cab to the airport - go as far as you need to escape the imposing feeling.

The take some time to think about what is real and what is unreal about the situation. Emotions often carry a sense of drama and importance. But if you can detach from them they can be seen as superficial and even sometimes largely illusory.

Then before returning imagine what your most powerful re-entry into the situation, which caused the upset, might be. Entertain yourself with this thought. It may help you not to again get snagged or brought down by what was getting to you.

exercise Basic Peer Counseling It is useful to separate emotion from thinking and acting in everyday life. The way this can be done is to set up a special time and space to look at our emotions. A space in which negative emotions can be expressed without any consequences.

The simplest way this can be done is to set up a listening exchange with a friend. The roles of listening and speaking about how you feel are clearly agreed. The person listening should just listen and not proffer her opinions, advice, experiences or stories. The listening must be non-judgemental The length of time you are going to do it for is agreed. The place chosen is ideally a space were you will not be interrupted. You may also like to agree that the contents of what you say are to be strictly confidential - this allows to to say emotive expressions like "I could kill him when he does that" without fear it could get back to the person in question.

The longer you can set aside for this and the more regularly you do it the more profound the results can be. However even a ten minute session at the right time can be very useful. It is surprising how few people have ever experienced ten minutes of uninterrupted attention.

exercise Intermediate Level Peer Counseling Having set up the basic relationship as above a few dynamics are worth knowing.

It is useful to start and end on an up note. So both of you should start with something good that has happened and end with something each of you are looking forward to. Even simply pointing things our or asking questions of things in the room can what is needed. If a session has not got going and one person is still sunk in negative emotion then a prolonged series of such questions may be necessary. Leave time to do this.

- One of the commonest negative emotions is caused by lack of appreciation. Providing plenty of appreciation within the counseling session can do wonders. You can also encourage the person to appreciate themselves.
- The expression of emotions should be encouraged and calmly accepted and even appreciated. People fear they could get 'lost' in crying but in my experience in the last 25 years this has never been the case.
- A certain degree of physical closeness can help a lot. If the two people have the sort of relationship in which a hug is normal then this can be useful an times when the speaker is feeling vulnerable and could do with a reassuring hand.
- If a person speaks for some time without any emotional expression or colour in her voice you may have to go back to looking at positives. Where an emotional situation is stuck then considering the opposite to the situation can be useful. If there was no happy of safe times in your childhood a request to make up a story in which a child is safe and happy may bring floods of (healing) tears.
- Finally its all down to a caring attitude, time and experiment.

Note: There is no advanced exercise because I think that advanced counseling really needs the guidance of an experienced teacher.

exercise Acceptance Self-appreciation can be a good strategy to survive a stressful or frustrating situation and find creative new directions. Particularly when your best efforts at life do not achieve your goals. Things are all going wrong, you may seem to be losing control, there are too many demands on you.

Our attempts to overcome the limitations we inherited and grew up with, and to make the most of what abilities were left intact can be a joyful struggle. It is often when we can appreciate just how well we having been doing, when the whole picture of our situation is taken into account, that we can come a wise acceptance that allows us to progress step by step. Sometimes the effort to progress against the odds creates stress that defeats us. I'm suggesting that 'giving up' is a tool for temporary strategic use and not a lifestyle.

Appreciate the struggles you have faced - make a list if needs be. What would it be like to 'give up' on some things that are not giving you satisfaction?

exercise Attention

> “It is more than looking someone in the eye whilst they talk, although that helps. It is a really deep, dynamic form of concentration, bringing to bear all you know about the person you are focusing on, plus holding in mind everything else which might be relevant, whilst keeping yourself mostly quiet. It is about having respect for, expectations of and curiosity about, the other person. It is about creating a safe space for the focus person to express their own thoughts and feelings without fear of criticism or judgement” Micheline Mason & Alan Sprung, 2015

Apply what you can get from this quote to key people in your life.

POSTURE EXERCISES

exercise Correct Use of Body: a checklist It is difficult to assess your own wrong habits accurately or in detail due to the integration of breathing with other body co-ordination. To do this well you really need the help of an expert, however here are some generally useful hints.

- The weight of the head is held up by a thread, the neck muscles are released and the head balances on the spine with the minimum of help from neck muscles.
- Feel breathing as an activity of the middle back and sides of the abdomen as well as to the front of the chest were it is more obvious.
- As you exhale release tension in the upper chest, shoulders and neck. There is a feeling of air being pumped into the spine.
- As you inhale feel the trunk expansion as a full and even increase of girth and length. Notice how the back widens and spine elongates. Relax and allow it to happen as fully as it will.
- As you breath out check that the genitals and buttocks are relaxed:
- To check the flexibility of the lower ribs which is most important for the full use of the lungs. Rest the wrists against the sides of the ribs just below the breasts. As you breath out it is common to find the chest rising instead of the sides of the ribs expanding. To remedy this place your fists against the lower ribs and press hard as you exhale. Then feel the ribs swing out as the breath comes in. Repeat this rhythmically several times.

exercise Postural Imagery Lie on your back with knees up and arms to the side. Have a small cushion supporting your head. Breathe normally, relax and choose one of the following images to hold in the minds eye.

- See your own diaphragm as a piston that moves up a few inches during exhalation and down during inhalation.
- Imagine a long thermometer in the central axis of your trunk. The red mercury moves up towards the head in exhalation and down towards the pelvis with inhalation.
- Inhaled air is imagined flowing down channels in the back to fill balloons in the pelvis which extend as filled down the legs towards the heels. Hiss out the used air without effort.

exercise Release of Shoulders To increase the flexibility of the shoulder girdle and rib cage.

A. Rest Position Method. Lie down down with knees up and arms extended beyond the head. Exhale forcefully with a prolonged sibilant s s s s s s s s s s s s s s s s . Hiss for as long as possible without bending the spine. Repeat 4 - 8 times resting between each attempt.

B. Standing Method. Lift shoulders alld then drop. How easily do they fall back into place?

Raise arms above head and hold them up there. Exhale, hissing, as long as you can on a single breath. Then whilst inhaling allow the arms to swing down and hang loosely. Shrug your shoulders again and compare the ease with which they drop with your previous attempt. repeat 3 - 5 times.

Be sure the neck stays relaxed.

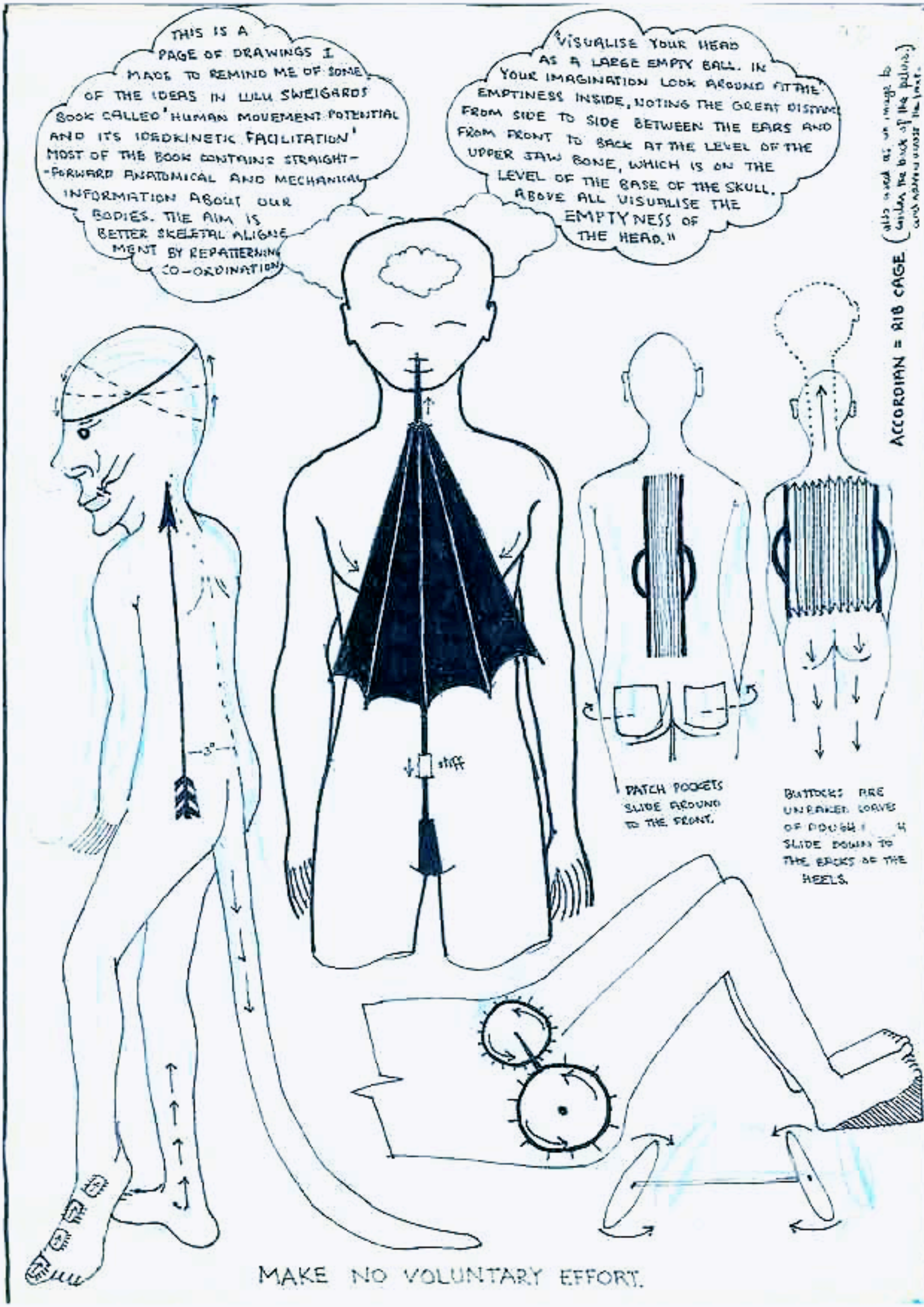
exercise Postural Imagery 2 As with the following activities the most fundamental image for breathing is that of the long 'spine'. Imaging a long centre line within ourselves will help us to relax eyes, nostrils, jaw, neck, shoulders and breath. Touch these parts of the body as you 'let go' or 'release' and relax thinking of the long centre line.

The head must be seen as an extension of this centre line (as the spinal cord is in fact an extension of the brain) and perfectly balanced. This image and the resulting improved balance of the head on top of the spine makes the head feel lighter.

On exhalation feel our weight dropping down the back of the spinal column.

Having achieved the above mixture of perception and imagery. On inhalation see the spine as lengthening and the space between each vertebra increasing... relieving the intervertebral disc pads of pressure. Allow yawns or sighs if they arise.

notes in diagram from Lulu Sweigaard 1974


THIS IS A PAGE OF DRAWINGS I MADE TO REMIND ME OF SOME OF THE IDEAS IN LULU SWEIGARDS BOOK CALLED 'HUMAN MOVEMENT POTENTIAL AND ITS IDEOKINETIC FACILITATION' MOST OF THE BOOK CONTAINS STRAIGHT-FORWARD ANATOMICAL AND MECHANICAL INFORMATION ABOUT OUR BODIES. THE AIM IS BETTER SKELETAL ALIGNEMENT BY REPATTERNING CO-ORDINATION
"VISUALISE YOUR HEAD AS A LARGE EMPTY BALL. IN YOUR IMAGINATION LOOK AROUND AT THE EMPTINESS INSIDE, NOTING THE GREAT DISTANCE FROM SIDE TO SIDE BETWEEN THE EARS AND FROM FRONT TO BACK AT THE LEVEL OF THE UPPER JAW BONE, WHICH IS ON THE LEVEL OF THE BASE OF THE SKULL. ABOVE ALL VISUALISE THE EMPTYNESS OF THE HEAD."
ACCORDIAN = RIB CAGE
stiff
PATCH POCKETS SLIDE AROUND TO THE FRONT.
BUTTOCKS ARE UNBAKED LOAVES OF DOUGH
SLIDE DOWN TO THE BACKS OF THE HEELS.
MAKE NO VOLUNTARY EFFORT.

exercise Core Strength Enabling the Transversus Abdominis to do their stabilising work by bringing them into conscious control. The basic element of strengthening you lower back and avoiding sciatic and disc problems.

First: Find the neutral position of the lower back. Not too arched and not too straight. Second: Lie in the critical rest position (on back with knees up) and breathe normally. On an out breath grip your pelvic floor muscles (as if stopping yourself crapping) and then at the end of the out breath make hummm. You can feel the TVA muscles contracting by placing your finger inside the front of the pelvic girdle. Contract them about 20% and hold for a count of ten.

Repeat ten times daily.

During this exercise it is important that the spine remains still, that the upper abs or neck are not tensed and that breathing continues in a relaxed way.

This exercise may be taken into sitting and standing..

BREATHING EXERCISES

exercise Buteyko Breathing Although this is an breathing exercise system designed to alleviate the condition of asthma, a simple form of it may be used to strengthen the lungs and breathing apparatus.

Take a deep breath followed by a normal breath. On the second exhalation hold the breath at end of natural exhalation. Time your ability to hold your breath.

After letting go and breathing again keep the breaths shallow and rapid i.e. avoid starting breathing again with a gasp. Repeat two or three times.

Repeat daily before eating.

More advanced Buteyko guidance may be found online.

exercise To Strengthen the Diaphragm

Without tensing the throat make & long staccato to exhalation.

A series of little puffs out. Allow deep inhalation and then breath normally for six breaths.

Then repeat.

Don't overdo it at first.

exercise Stimulate the Lungs Finish a long exhalation with several blows out until all possible air is evacuated from the lungs. Repeat two or three times with a few breaths rest in between.

exercise: Deep Breathing The motions of relaxed breathing are felt low in the pelvic region.

- Lie down in a comfortable position on your back. Close eyes and breath naturally.
- Place a hand on the lower abdomen. Notice the movement there. Image the air going right down into the pelvis, and beyond into the genitals and down into the thighs if you can.
- Allow the movement in the lower abdomen to increase. Try and keep your awareness on letting go in this region for five minutes.

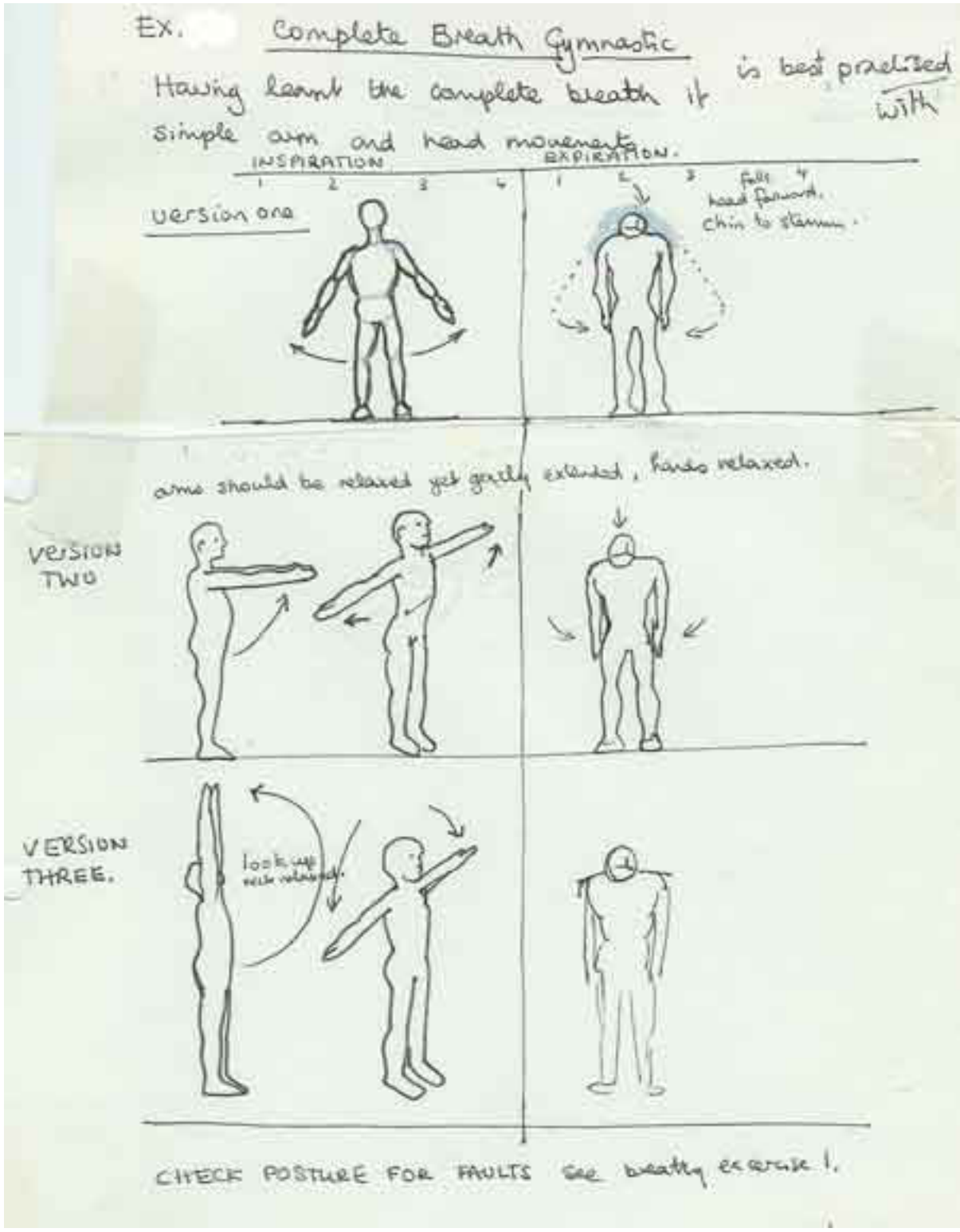
exercise Belly Breathing The expiration should not exhaust the lungs completely, but some breath should be retained. Enough to say a few words. Attention is concentrated in the tanden, which is the centre of gravity of the body, in the lower belly. Inhalation is short but sufficient air enters for a hearty exhalation.

Sit quite still, breathe gently, giving out long breaths, the strength in the lower belly… One should pull the chin in slightly, open wide the floor of Hara and expel the air fully and strongly. This exhalation must, when nearing its end become thicker, like a club. If the floor of Hara is devoid of strength, exhalation is superficial and wheezy, but if one really breathes from it the breathing becomes powerful and flowing. Durkheim

During inhalation the lower belly gathers strength by itself so the changeover to a slow smooth exhalation, which it powers and controls, is smooth and easy. Although the practise here is breathing the aim is to make the tanden the centre of strength and control for all activities.

exercise The Complete Breath This exercise strengthens the lungs and does not attempt to improve the process of normal breathing. As a basic exercise it can be allied to various movements to increase the range, capacity and strength of the breathing apparatus.

exercise Complete Breath Gymnastic Having learnt the complete breath exercise it is best practised with simple arm and head movements.



exercise The Ten Treasures These exercises are adapted from 6 - 8 exercises from an ancient Shinto Temple and were originally called the 'Reeling of Silk' which gives one a clue to the quality of movement required. They were taught to me in London by a Tai Chi student.

The movements should all be done slowly and smoothly except for the punches which can be done both slowly or fast.

hands relaxed.

push

sweep up diagonally

hands joined.

stretch up

The 'TEN TREASURES'

fingertips touching

stretch push up.

simply down.

slow deliberate movements:
neck side stretch

Slow movements allowing stretch. Allows breath to happen.

Ten Treasures is an expansion of the 6-8 exercises of the Ancient Shinto Temple scroll.

'Reading of Silk'

pull 'bow' breathing full stretch across front. eye follows 'arrow.'

repeat 3 to 5 times each side

hand detail

back to front tendon

circle around

look to back waist turn diagonal stretch x5 each side

Side bends from waist. x5

ⓐ ⓑ ⓒ

PUNCHES MAY BE DONE FAST OR SLOW.

punches to front front snaps on elbow breathing.

similar punches to side.

abdominal breath

expel air by lifting abdomen. drop forward.

expel remain air.

get up breath in

jump onto toes then drop onto heels. (controlled jolt to stimulate pressure points)

personal addition sidestep out. and in again.

hands flat to floor.

head relaxed.

exercise Abdominal Retention This is an advanced exercise adapted from Yoga. It is suitable for those who are fairly fit and in good health. Sit in a comfortable upright position that does not restrict the stomach. The head is bowed forward with the, chin resting on top of the sternum (breast bone). The forearms or backs of hands are supported on the thighs. Eyes are closed.

Exhale fully.

Now with a slow steady in breath make a quiet whistling sound.

With your mind follow the incoming air step by step as it fills nose/... throat/... larynx/. . . lungs/. . .

Unlike previous exercises the abdominal area is gently pulled back towards the spine. It is held in during inhalation. When full the breath is held for a second or two (If you have high blood pressure or coronary trouble do not hold breath).

Breathe out steadily and evenly through the nose. The rushing of air past the roof of the mouth should be heard as a light rushing sound. The abdomen is released but pulled beck against the spine to evacuate the final portion of air.

Now wait for a second before inhaling again.

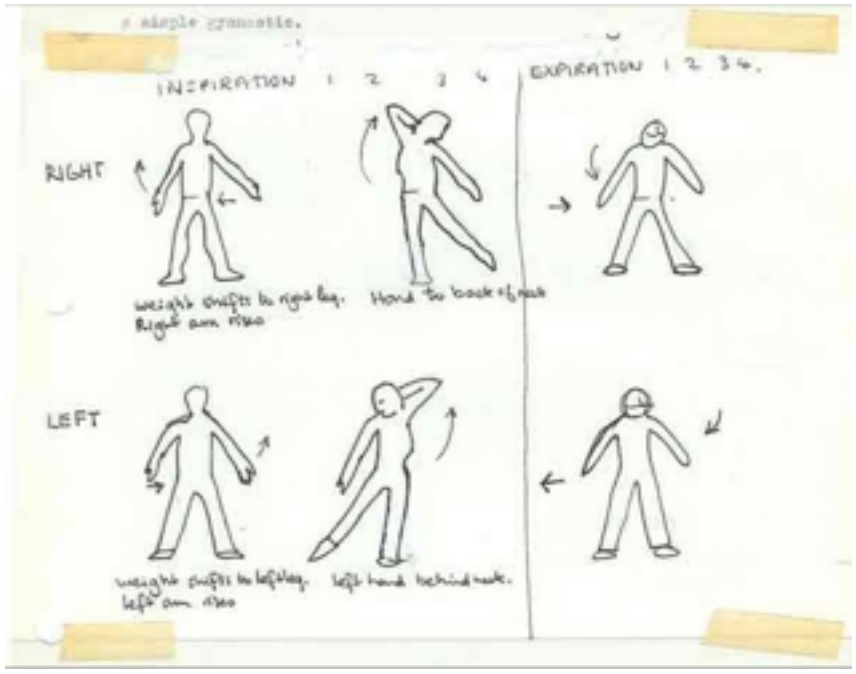
Repeat this cycle for five minutes or as you feel it is no strain.

Rest for ten minutes or so afterwards, preferably in the position known in Yoga as Savasana or the Corpse.

exercise Alternate Lung Breathing (complete breath gymnastic) Each lung is exercised separately as far as it is possible by means of a simple gymnastic.

Note: The stretch to either side flares the ribs and stretches the intercostal muscles between the ribs giving the lungs greater elasticity. To achieve this the elbows should be kept well up and back.

This exercise will improve general health by toning the entire torso by alternate stretching and compression.



exercise Alternate Nostril Breathing Sit with back relaxed but upright, body supple, head feeling as if it is lightly suspended from a wire. By relaxation allow the chin to tuck in slightly.

Place right thumb on right nostril, index and middle finger rest on forehead. Thumb closes right nostril, index and middle fingers rest on forehead. Thumb closes right nostril. Inhale through left nostril until lungs are full (called Apnea).

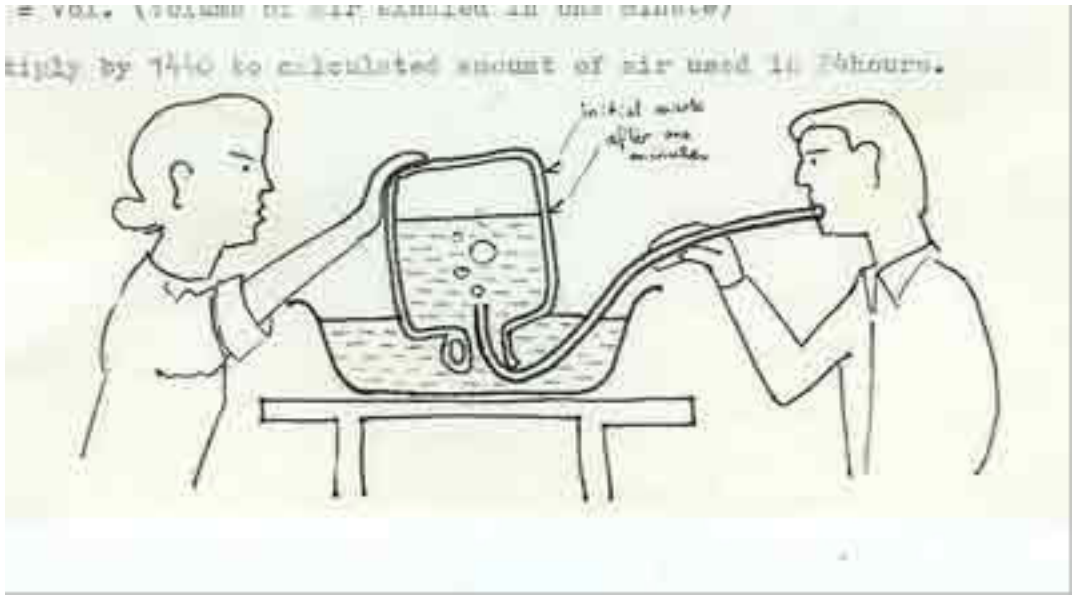
Close left nostril with remaining fingers. Release right nostril. Breath out until exhalation is complete (Dyspnea).

Inhale through same nostril to apnea. Change sides. Repeat seven times but only once a day.

exercise How Much Air You Breathe Fill a demi-john glass cider jar with water. Sealing the jar tightly with the palm of one hand hold it upside down with the neck immersed in a bowl of water. Get someone to hold it in that position while you insert a rubber tube into the jar.

For one minute breath in through your nose and out through the tube at your normal rate. By taping a ruler to the side of the jar or marking it with a chinagraph pencil you can measure how much water has been displaced. The volume of water displaced roughly equals the volume of air you have exhaled.

Displacement x surface are of water = volume of air per minute. Multiply by 1440 to calculate the amount of air used in 24 hours.



SLEEPING EXERCISES

exercise Pre Sleep Prescriptions Physical fatigue is useful. With many modern occupations people do not get physically tired during work. They get tense and mentally tired but this may hinder rather than help sleep. Relaxation happens more easily following physical exertion. An evening dance, jog or game of football will do the trick nicely. After lunch rest, after supper walk a mile.

1. Warmth: A warm aromatic bath, shower or massage are good after exercise. Infra red heat used in conjunction with massage can break up chronic tensions which intefer with proper sleep. Massage does not have to be skilled to produce marked results. A sympathetic and attentive stroking of the spine for five minutes before retirement can produce excellent results. Heat is most efficacious if applied to the feet.

Method: You will require two bowls of water. One is hot the other cool. Put both feet in the hot bowl for three minutes then into the cold for half a minute. Repeat this three times (3 mins hot, half a minute cold). This simple process improves circulation, relaxes the whole body and draws blood away from the head. Hot bed socks can have a similar, if less less marked, effect. Traditionally warmed on the evening hearth.

2. Lovemaking is also an excellent preparation for sleep especially if preceded by long sensual massages and reassuring verbal exchanges. Do not discuss home economics or current problematics.

3. Meditation before sleep will gradually turn sleep into 'meditation' and reduce the time necessary for full recuperation. Reading a book is a similar and more popular technique.

4. Mental images, of almost any sort, aids sleep and is the most natural vehicle for entering sleep. Relaxation is a prerequisite of having these waking dreams. Once your are involved in the images there is a sliding progression into dreams and sleep. Relax... Shut your eyes and stop thinking and worrying. Make an effort to watch whatever appears before your minds eye. If you have trained your imagination you will be able to conjure up specific pictures. e.g. sheep jumping hurdles.If untrained you can take an active interest in whatever appears.

5. Fears about sleep are more common than might be imagined. Do not be ashamed of mentioning these to someone you can trust not to react embarrassedly. Emotional crisis in the evening can have a devastating effect upon sleep and so should be avoided at this time at all costs. In fact emotional unrest of any kind must be calmed before sleep can be really refreshing. Talking to a friend is a useful pre-sleep routine to alleviate worries. Confide in them the secret fears and upsets that you would otherwise carry as a disturbing burden into the Land of Nod. Be sure to avoid repetitive moaning and end on a good note. In fact if you haven't got anything specific to get off your chest it is a good idea to do one of the following:

> Remember good things that happened that day or in childhood.
>
> Think of things you are looking forward to.
>
> Appreciate each others qualities.
>
> If you are alone before bed you can still think along positive lines. A pre-sleep scrapbook of happy memories, favourite images or poems will help to focus the mind in the right direction.
>
> If a disturbing feeling (of fear) persists it may help to adopt a defensive attitude. Cross hands and feet or lie in a foetal position.

Further: you can try Performing a ritual of protection to induce the psychic protection necessary to achieve rest.

Ritual of protection: Solemnly draw a circle around your bed. Invoke a power you can trust to make this circle an invulnerable defence during slumber. Make this invocation as serious and ceremonious as possible. Note: Fear of dying whilst asleep is common amongst teenagers and older people. If you have this fear it may be helpful to review recent achievements - however insignificant they may feel.

A. Pills, Alcohol, Cannabis. Many people achieve sleep by sedation. Such sedation is likely to reduce the effective restorative qualities of sleep. However it is likely to be better to sleep after a glass of Whisky or joint than to lie awake tensely

tossing and turning for hours. There is no strong but harmless herbal sedative but herbal potions and hot milk beverages ease the stomach should it be left in an acidic condition.

B. Food especially cheese, beans, fried food and, meat, should not be consumed in the four hours before retiring. This is roughly the period of active digestion. The process of digestion requires a higher level of metabolism than the low level of body functioning that is best for sleep. Try Lime Blossom tisane with a teaspoon of honey or Slippery Elm Bark drink. Kelp also known as Laverbread or Dulse is said to be a good sleep food.

C. Feng Shui: Consideration should be given to the atmosphere of the bedroom. Noise, bright lights or startling colours that will jar the senses should be excluded. At the same time it should not be drab and depressing. Pictures on the wall may be carefully chosen to reinforce feelings of safety. The simple arrangement of having the room in darkness with a small bedside reading light or candle may be most pleasant. If you have discovered a reassuring smell in your olfactory explorations this may be introduced (most commonly flowers on the bedside table).

exercise Environmental Conditions for Best Sleep A room temperature of around 14C is ideal, with enough ventilation to prevent a build-up of stagnant air.

A mattress on the floor has a kind of beatnik simplicity but should be avoided due to the likelihood of condensation. During the human body gives off a considerable amount of water vapour likely to condense on the floor and on bedsprings if it is at all cold. Check under your mattress Is there any sign of damp or mildew? If it is not possible to make a bed frame air the mattress regularly on its side.

Hot water bottles are cosy and help you relax more quickly but an electric under-blanket cannot be beaten to provide a welcoming bed in the winter. This is especially useful if the room is damp, the bed used irregularly, the bedroom has no heating or the mattress is laid on the floor.

In cold or drafty rooms a nightcap is useful to keep an exposed head warm. If blood needs to go to the head for warmth it may also activate the brain and disturb sleep.

Blankets: Insulation below is as important as above. You may find that you are warmer putting one of your blankets under the bed sheet. A good system for over blankets is to alternate plain and cellular knitted blankets. This sandwich method provides excellent insulation as it is the entrapped air that gives good insulation rather than the fibre itself.

Duvet: Lighter weight covers are claimed to stimulate our touch sense, which remains relatively alert during sleep, less than heavier blankets. The duvet also settles around the sleeper moulding gently into hir profile. Of course it is also very warm relative to weight and it is easy to 'make the bed'.

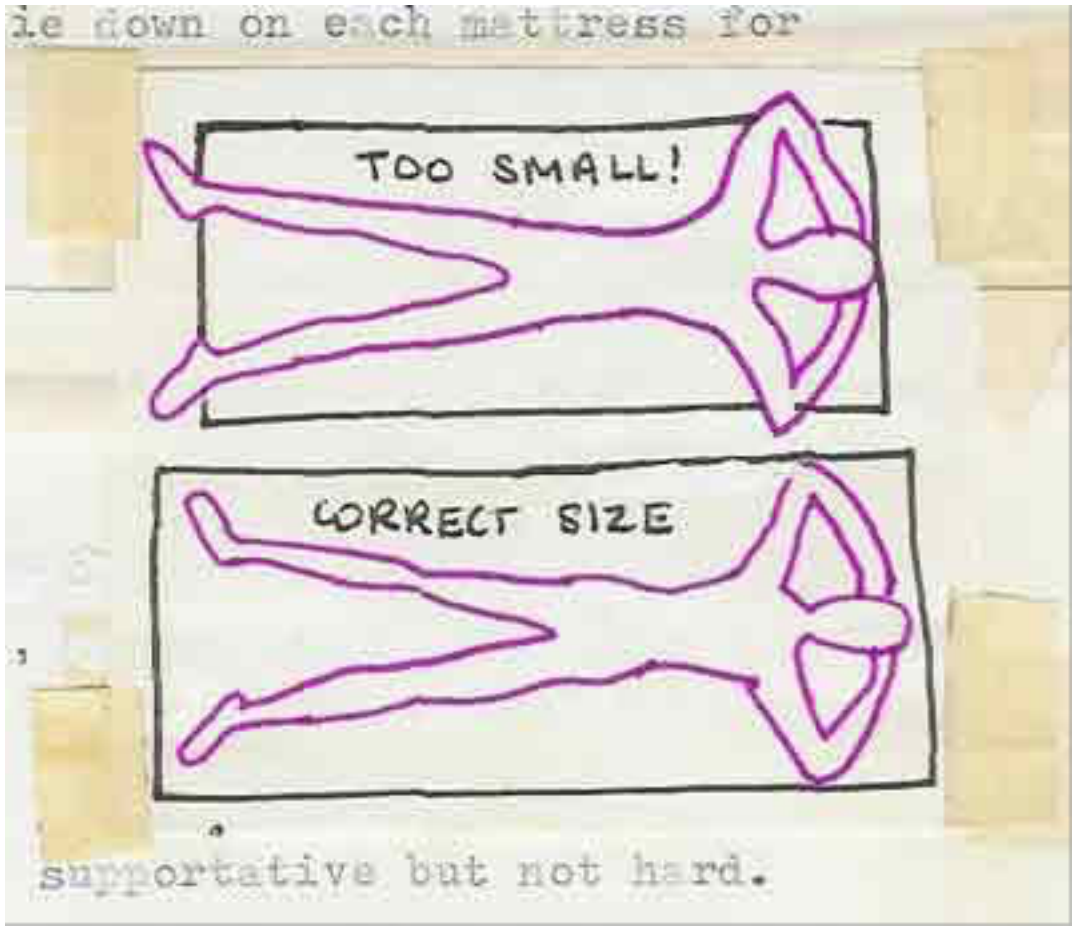
Make a plan of how you can improve your environmental sleeping conditions.

exercise Correct Support for Good Sleep Check you bed with a straight edge. There should be no sag in mattress or base. Sag will result in backache and undue body movement during sleep resulting in exhaustion. Uneven spinal support may not be noticeably painful or uncomfortable but results in accumulating postural damage and poor rest.

New beds: The general advice is to pay as much as you can to get a long lasting bed and take time trying out different mattresses so you get one that is most comfortable. Actually lie down and rest on each mattress for a few minutes. It is not enough to push it with a fist.

Size of mattress: The distance between your elbows with hands on hips is the width you need. There should be six inches from your toes to the end of the bed. The width dimensions should be increased with two large partners, one who moves a lot in the night or one who is a light sleeper. It is a false economy to buy a bed less than five feet wide. The bed

should be evenly supportive but the upper layer of upholstery should not be too hard. It must have an adequate insulation value. Softer beds can seem deceptively comfortable in quick bed tests. Partners of different weights should get a split double each half of which is designed for their weight.



Secondhand beds are usually worthless. A ten year old mattress with have clocked up 30 to 40 000 hours of use. A good mattress is a prime investment.

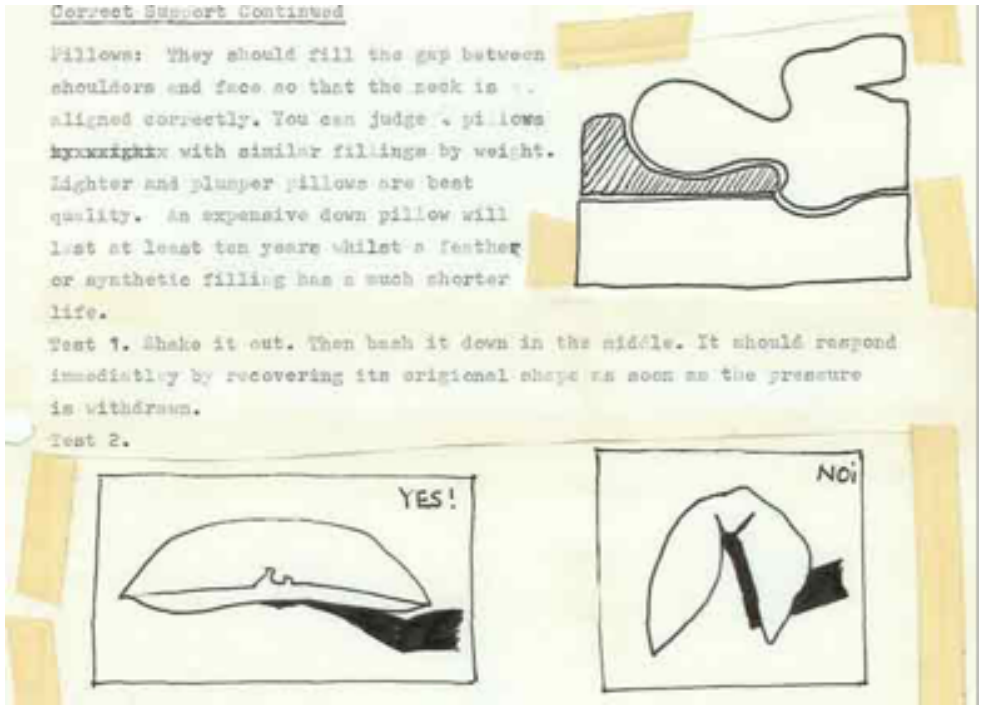
Posture: It is agreed by experts on posture and Zen masters that lying in a side position is best for sleep. Allow the shoulders to sag forward and use a pillow to maintain correct head position. Lying on the back or face pulls the pelvis downwards due to the ligament on the front of the thigh joint. This prevents full relaxation.

Pillows: They should fill the gap between the shoulders and face so that the neck is aligned correctly. You can judge pillows with similar fillings by weight. Lighter and plumper pillows are best quality. An expensive down pillow will last for years while a feather or synthetic filling has a much shorter life.

Pillows can be breed micro organisms and so should be regularly aired and changed every year at least. It is said that burning Euclyptus, Orange or Thyme candles occasionally will help to get rid of any harmful bacteria.

Pillow test 1. Shake it out. The bash it down in the middle. It should respond immediately by recovering its original shape as soon as the pressure is withdrawn.

Pillow test 2. If a pillow is held up on one hand it should maintain its shape and not collapse.



exercise Waking from Sleep In the periods before and after sleep we are most open to suggestion. The duration of this period of semi-trance varies with individuals. Informations received during this time are most influential on the whole being. This is also time for self-generated thoughts. We should look carefully at the quality of out mental intake during such times.

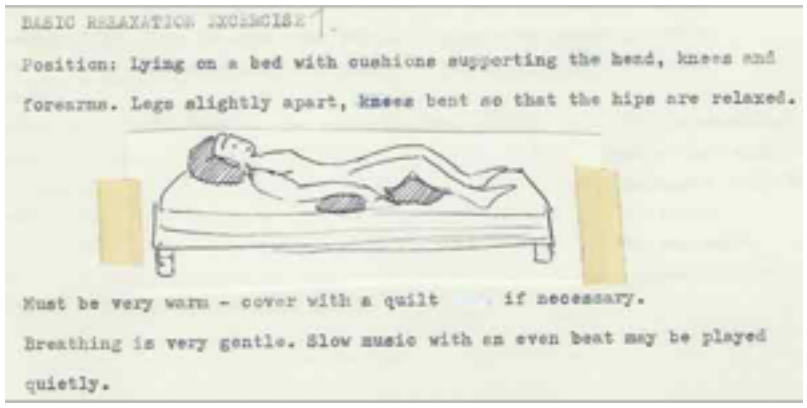
> Some people will turn on the radio as soon as they wake. The professional cheery tones of the D.J. divert them from any cloudy thoughts that might gather. However random DJ drivel may not be the best early morning brain fodder. Better to make your own tape. This might be music chosen for its uplifting associations.
>
> It is useful to review what you are looking forward to in the coming day. Even if it is a day you dread an effort to look at what enjoyment might be gleaned from it will be invaluable.
>
> Another technique is to cut the semi-comatose period to a minimum by leaping out of bed the moment you awake. The very effort of will power that this requires proves beyond doubt that you are still your own person.
>
> Prayers or a non-religious equivalent are a possibility as is more meditation if you can bear to keep from breakfast and the days action.
>
> The newspapers or news are not often a good way to start the day. They are too full of irrelevant bad news. Experienced paper readers are able to scan the paper for new which catalyses their own activity. Even then they may have to read between the lines of a bland or sensationalist report.
>
> Remembering your dreams and jotting them down is another useful morning ritual which, even if you don't go to the trouble of interpreting them, can provide an interesting collection and can serve as an ideas pool for creative writing.
>
> Choose the clothes you are going to wear the night before. In the winter warm them in front of a radiator or heater before you arise. The principle is to think of making your passage from sleep to a brand spanking new day of your precious life, as smooth as possible.

These minutes in which we, once more, awake to a new day are important. Beginnings and ends are important. And a day is perhaps the most important unit of our life which we should aim to start and end as well as we can.

RELAXING EXERCISES

exercise Basic Relaxation

Position: Lying on a bed with cushions supporting the head, knees and forearms. Legs slightly apart knees bent so that the hips are relaxed. Must keep very warm cover with a quilt if necessary.



Breathing is very gentle. Slow music with an even beat may be played quietly.,

Instructions: Breathe in for a very slow count of 4. Gently and consciously stretch the whole body. Feel a slight tension in the neck, back, hands, buttocks, legs and feet.

Breathe out for a slow count of 4. Now 'let go' of all this stretch and feel the body weight sinking into the couch.

Repeat this cycle of 8 counts 4 times. Gradually let the stretch become more gentle, deepening the relaxation.

Then change to a shorter very gentle natural even breathing, 2 counts in and 2 counts out. If you do not then feel fully relaxed, even to the extent of going into a light sleep, then repeat the exercise as often as necessary.

If you are worried about falling asleep, set an alarm clock.

exercise Autogenic Relaxation

Lie down, or if you think you might fall asleep, sit on a chair. Shut your eyes. Notice where back and/or buttocks touch the chair or support. Feel the weight of your body pressing down onto the support and then imagine the feeling as if the support were pushing up.

Lift each arm and leg in turn and let it fall back by its own weight. do the same with the head.

Quietly or sub-vocally give yourself the following instructions:

"My right arm is heavy and I have let go"

"My left arm is heavy and I have let go"

"My arms are heavy and I have let go"

"My right leg is heavy and I have let go"

"My left leg is heavy, and I have let go"

"My legs are heavy: and I have let go.

"My arms and legs are heavy and I have let go"

"My head is heavy and I have let go".

"My right arm is warm and I am at peace". etc...

"My arms and legs are warm and I am at peace".

"My whole body breathes"

"My belly is warm"

"My brow is cool"

"My face is like a limp wet flannel draped over my skull"

"My throat is relaxed and hollow and I have let go"

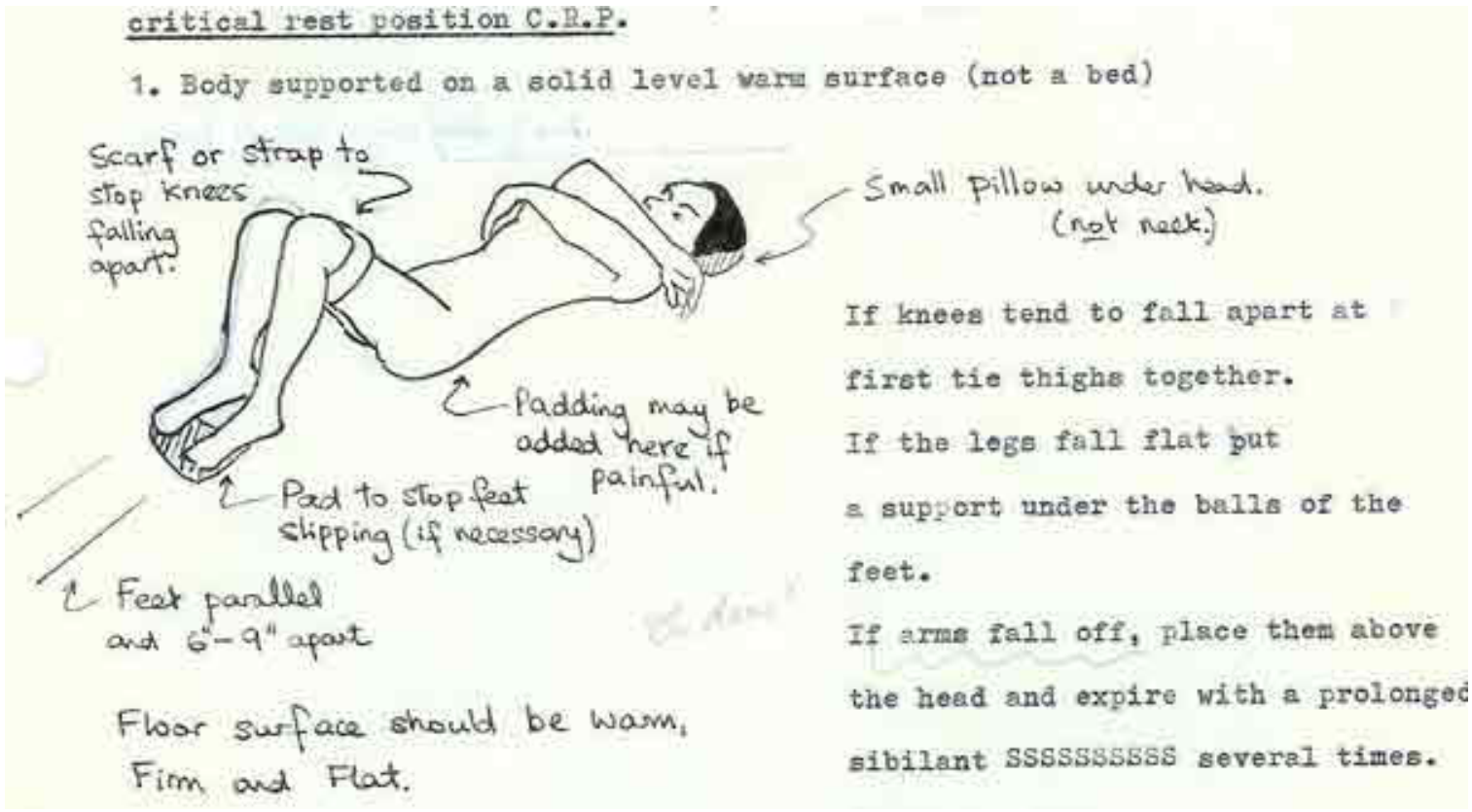
"My eyeballs are floating in their sockets and I have let go"

"I let go of the back of my neck, it elongates and I let go"

Adapted from Schultz and Luthe's system of autogenic therapy (1969)

This could all be recorded in a low relaxed voice and played back.

exercise Critical Rest Position The most successful method of easing muscles and improving posture is the daily practice of the critical rest position or CRP. The body is supported on a solid level warm surface (not a bed)



Lay on back with knees up or rest calves on a chair. If knees fall apart at first tie the thighs together. If the feet tend to slide but a support under the balls of the feet. Place both arms over the torso. If they falloff, place them above the head and exhale with a prolonged sibilant s s s s s s s s s s s several times. Do not force any part of the body into a position.

CRP is best practiced before and evening meal and before retiring. Try to do about 20 minutes although as little as five or ten may be sufficient to make a difference.

To get up first turn slowly and roll onto your side.

(CRP is from Lulu Sweigaard's posture laboratory)

exercise Relaxation Image Lie comfortably breath easily. Allow eyes to close. Check through the body from head to toes to see if you can feel any tension. Don't forget eyes, nose, mouth, chin, throat, neck, chest, diaphragm, pit of stomach, genitals, anus and hips.

Once you are aware of an area of tension imagine it as a shape or colour. If you can do this then let the shape or colour fade or float away. If not then gently articulate that part of the body until tension begins to drain away.

Check through the body again. Do you notice any areas of tension that you didn't before.

Then take in what it feels like overall in the relaxed state. Create a vivid mental image of what it is like. Resolve to take this feeling with you as you get up.

exercise Quick Relaxation In Twenty Breaths

Are you sitting comfortably?

Count each exhalation and on each exhalation..... R E L A X .

Every breath you take and number you count you become more and more and more relaxed.

This is useful in almost any situation that you feel tense.

SITTING EXERCISES

exercise Getting Up from Sitting To avoid wobble when sitting down or getting up imagine you are naked between two rough walls.

Imagine the supporting chair is on a slippery floor (although your feet are on a dry surface). When sitting down or getting up take care not to move the chair or loose balance yourself.

Weight is transferred onto both feet equally and simultaneously.

exercise Sitting Imaging Sit on a firm chair that is low enough to make your knees slightly higher than your thigh/hip crease. Rest palms on thighs. Establish the centre line image and balance head.

Feel or image the weight of the body falling down the centre line. (Drop shoulders release buttocks)

As it reaches the pelvis the body weight is transferred laterally through the buttresses of the pelvic girdle, down to the two sitting bones. Feel or image this. (it may help to locate the two sitting bones with your finger tips)

Rock very slightly from one sitting bone to the other.

Then, sitting still, image the spine dropping through the iliac (the pelvic area of the spine) to form a stabilising third leg. (this does not actually exist !)

REST ON YOUR SITTING BONES with the weight balanced around your centre line.

exercise Zen Sitting

Sit steady!

Don't wobble!

exercise Sitting Down and Getting Up 1 The sitting action is an unfinished movement. It is really a half squat. The squatting action, being a fully completed movement brings more muscles into play. Try the squat and see how it lowers your body through your centre line, if you allow your thigh and knee joints to fold sufficiently.

This experiment demonstrates the need of keeping the thigh joints flexible. It forces you to begin getting more action into the upper part of your legs. The chair allows you to be careless in this because you are unconsciously thinking of too short a distance in going to the chair seat in contrast to your thinking in going into the squat. You are not using the trick of balancing weights all sides of your centre line as you get into a chair.

Picture a juggler as he goes into action. He starts an object moving and then follows it with another one, timed in good rhythm. He can keep two or more objects in the air by properly timing the distance, between them and understanding

the effect of gravity on each. You have bones in your body with which to carry out the same trick. Start with the centre line as it is the body's lead off in the launching of any movement.

Use a wooden chair or bench as it will give greater freedom of movement while you are learning a new way. The movement is as follows:

1. Stand in front of the chair with your back towards it.

2. In your imagination picture the central line. Relax your left sitting bone and then the right one.

3. Place the heel of one foot two or three inches nearer the chair than is the other.

4. Imagine that the sitting bones are leading you down to the chair. Give them the go signal. (The head follows the vertebrae by remaining in the centre line)

5. Slide back in the chair by first relaxing the left sitting bone and placing it back a bit, and then by relaxing the right sitting bone as you place it back a bit. Continue to slide back in this way until you are comfortably seated. This exercise uses your deep abdominal muscles close to your centre line. It will flatten your abdomen and slim your figure.

To stand up from sitting:

1. Imagine the centre line to be lengthening down. Relax the shoulders and rest your hands in your lap, palms down.

2. Relax the left sitting bone and think, up into the traffic bridge to very slightly lift the bone and place it forward a trifle. Relax the right sitting bone and think up into the traffic bridge to very slightly lift that bone and place it forward a trifle. Continue with one side and then the other until you are near to the edge of the chair

3. Place one heel 2 to 3 inches behind the other

4. Keep your head in the centre line as it takes the lead in going up.

5. Think up through the traffic bridge and give your the thighs the go signal, as you rise to your feet. This movement is difficult until your legs have the power to boost you from below. The sitting bones need first to relax under you before the legs can take over the booster thrust.

exercise Sitting Down and Getting Up 2 It is easier to sit down or get up if the centre of the thigh - knee - ankle joints follow one over the other in sequence from the top down; so that the movement at one joint carries the impulse to the others.

The first impulse in movement should come from deep in the abdomen where the thigh is slung to the spine. From the thigh socket it falls to the knee and then to the ankle. This allows flexibility of the lower leg and greater ease of movement at the ankle. The reason why the middle line of the legs is a good image to follow is because it allows action to fall in sequence through all three leg joints, thigh - knee - ankle.

Many men instinctively use the following folding movement in tying their shoes. It is a wonderful exercise for keeping the leg joints supple, and because of the fact that it is a daily necessity it does not become boring or forgotten.

Movement for tying shoe laces: Stand sideways at the front corner of a chair after you have put on your shoes and are ready to tie them. Stand close to the chair, but give yourself room to swing the leg next to the chair directly forward. Swing your leg forward visualising the action as high in the Psoas major muscle. When, through the bending of the knee, the foot is on a level with the chair seat, drop your foot on to the seat. Now with the foot resting on the chair you are in a favourable position to go into the squatting action. Do this by lowering the body.

Think of the centre line and when you have a nice awareness of it, including the balance of your head, lower the line as straight down as you can toward the floor. Your position is now low enough to put your hands in place to begin tying your shoes. The inner edge of the shoe should be parallel with the edge of the chair seat. To tie the other shoe, stand in front of the chair facing in the opposite direction and follow the same instructions.

This movement done every day will be very rewarding in keeping the joints supple and in maintaining good body alignment. It relaxes the muscles in which you are over contracted and strengthens those in which you are weak.

exercise Sitting to Work

Checklist:

* Make sure the chair is close enough to the table.

* Lean forward from thigh joints rather than bending in the back.

* Feet are best placed 'in step' rather than side by side. Crossed legs cause restricted circulation.

* Relax the shoulders especially on the side of the writing arm.

* The best chair back supports the back of the pelvis rather than the upper back.

exercise Just Sitting

Just sit quietly and contemplate the following instructions:

* Centre the weight of the torso on the pelvic rockers. Imagine you are sitting on a one legged stool; without muscle tension or 'trying' keep this image in your mind.

* Level the top of the rib cage. A friend can check you on this - it commonly means moving the 1st rib circle up in front.

* Allowing the spine to move forward, at the level of the 12th thoracic vertebra, to the centre of the trunk. This ensures the back isn't unnecessarily flattened.

* Be aware of breathing and a relaxed belly. A slighter tension is preserved that gives strength for the whole trunk to stay relaxedly erect.

STANDING EXERCISES

exercise Standing Still or ‘Tadasana’

BKS. Iyengar, the Yoga master, accuses the human race of not paying attention to how to stand well. People he says, often have their weight thrown on one leg or back on the heels, or to the side. He advises us to look at how our shoes wear to see the evidence of imbalanced weight distribution. These things have effects of the elasticity of out spine. Feet should tend to be kept parallel, with hips turned in and chest forward. He claims this gives a feeling of lightness and even gives the mind more agility! Poor standing fatigues the body and soon the mind becomes dull.

It is therefore, he says, essential to master the art of standing correctly. Standing practice in Yoga is 'Tadasana'.

1. Stand with feet touching, the body held erect.
2. Tighten the thighs to pull on the knee caps and 'contract the hips'.
3. Keep the stomach firm, pull the chest forward, gently stretch the spine whilst keeping the neck straight.
4. Distribute body weight evenly on the soles of both feet.
5. The arms can ideally be stretched out over the head, but it is acceptable to hold them down palms facing thighs.

Paraphrased from Light on Yoga by B.K.S. Iyengar

This should be really done with a set of yoga asanas finishing with relaxation.

Note: Japanese Hara, the culture of the belly centre seems to go a stage on from this exercise. Having stretched the knee muscles and made the legs firm as tree trunks the strength is then with drawn from the legs up to the lower belly. It is then said that one places the feet on the ground by the strength of the 'koshi' (lower belly centre) alone.

exercise Standing 1 With reference to the section on body co-ordination in the senses section.

The simplest direction towards postural improvement is:

The visualisation of spinal lengthening should be made without any application of will or effort. If one 'tries' as well as visualising, wrong muscles are tensed. The aim of the 'lengthening' is to activate only the muscles concerned with spinal support and not the muscles involved with larger movements of the torso. When these muscles are successfully reactivated the spine becomes an autonomously structured unit able to act as the flexible and responsive basis of an efficient erect posture.

An image often used is that of a cord from heaven attached to the base of the neck. The spine in our back hangs loosely from this thread. The neck and skull however are pulled up with it. These visualisations should not be accompanied by any muscular effort.

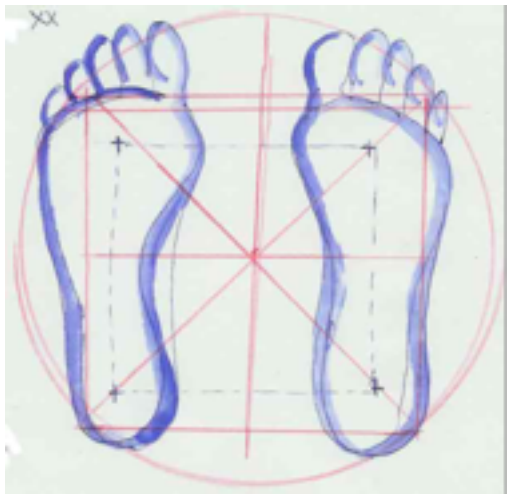
exercise The Small Dance If poor skeletal alignment is chronic, as is most common, standing fatigue will soon occur. This is caused mainly by the pressure of tight muscles restricting veins especially in the lower limbs.

With good posture the weight is supported dynamically through the skeletal framework and frequent small sways distribute muscle tension and aid circulation around joints. This subtle movement has been called 'the small dance' by Steve Paxton.

When standing for a long time it is better to stand in slight step position and allow these tiny movements to continue to happen and to become aware of them as you might if you were enjoying dancing.

Rather than shift from one uncomfortable distorted position to another which is the common pattern of standing movements. Great for waiting at bus-stops.

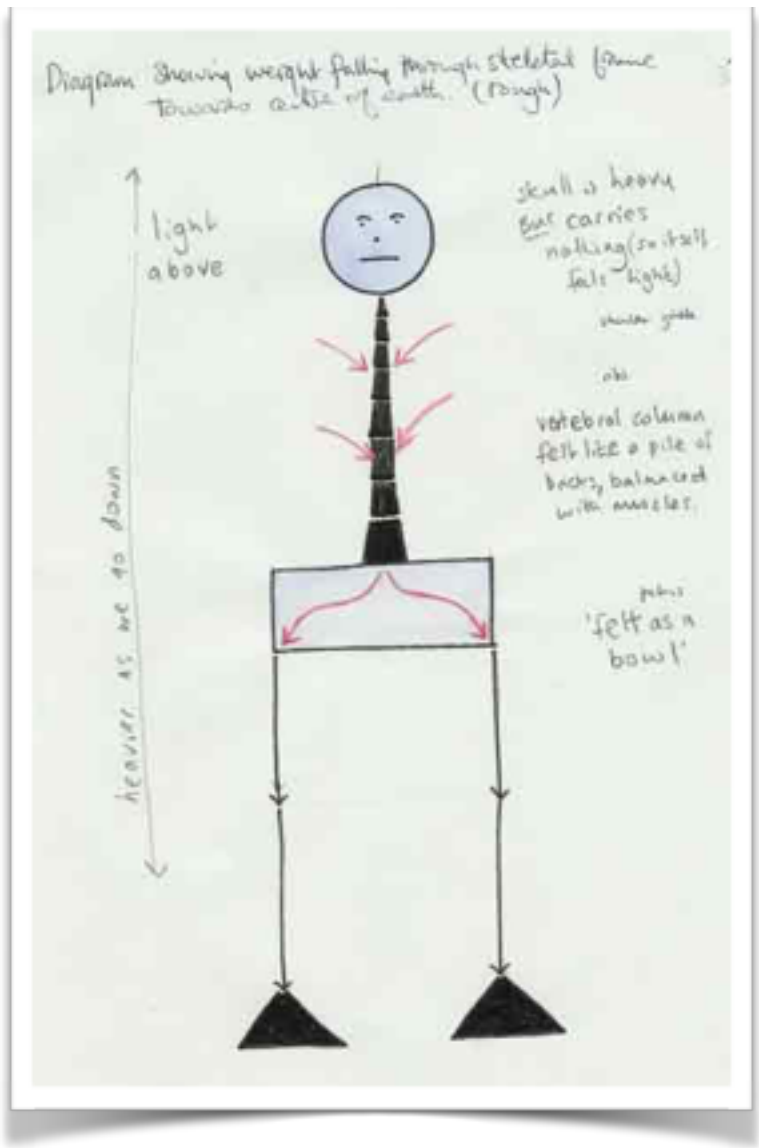
Meditation on these small movements give a more detailed awareness of our standing postures.



exercise Standing Posture: a guide to further work on the posture of standing

1. Correct pelvis tilt. The pelvis is commonly tipped too far forward. A good image to hold is to imagine the pelvis as a bowl full of water that needs to be held level.

2. Centre weight at the thigh joints. Be aware of 'the small dance' especially as it occurs around the thigh joints.



Relax breathing so the belly participates in the breathing motion. Now move very slightly to one side so that your weight travels predominantly down through one thigh joint. Then with the subtlest hip movement transfer weight to the other leg. Do this until you can accurately place your weight on either leg. Then work on becoming aware of sharing weight equally between the two joints.

3. Improve use of Psoas major muscles. These deep muscles control the spine/pelvis relationship.

4. Better balance of spine and head position Awareness of breathing will often give us the most profound reassurance of our present time safety and allow the tensions to temporarily slip away.

As this dynamic relaxation occurs a shift of the spine/neck/head relationship will often be felt. The chin will tuck in and the back of the neck be felt to lengthen and the head feel light and physically 'empty'. These effects are noticed through relaxation rather than by trying to do them.

Work on posture may be started by breathing relaxation and solo visualisation of imagery. Radical progress needs to be monitored by a postural teacher, and accompanied by psychotherapy work on the original emotional causes of postural rigidities.

This guide although limited in scope can at least be a guard against the amount of incorrect knowledge that abounds in this area of therapy.

exercise Standing 2 Stand with feet parallel. Weight equally on both feet with weight slightly forward so that about 3/4 of your weight is going into the ground thourgh the front of the foot and about 1/4 through the heel.

Very very slowly shift your weight from one foot to the other. Returning to the centre (weight equally on both feet). The shift the C of G from front to back - re-establish the centre.

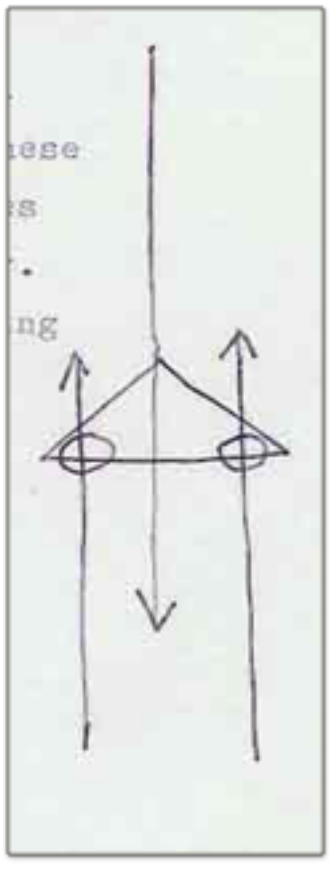
Repeat on the diagonal.

Finally take your weight in a circle and around the edge of the feet spiral slowly in to find the centre again. Pause. Spiral outwards.

Do this slowly and with as much awareness as possible.

exercise Standing in Your Centre Establish the image of a long centre line. Now put all your attention to the two hip joints. Sense the weight equally distributed onto the two thigh bones.

The centred weight of the upper body is balancing on these two bones (release buttocks and neck). This weight goes down the legs into relaxed feet felt as pyramids of clay. As you exhale imagine the weight of the upper body falling down the centre line, through the pelvis.



Once this image is established... As you exhale imagine support rising through the thigh sockets. Image the centre line as stationary and extending down and being fixed to the floor.

Taking tiny steps begin to rotate very slowly around this axis. At first initiate the rotation from the hip. Later it may be initiated from other parts of the body.

After two or three revolutions walk forward a few steps... keeping hold of the centre line image.

Reverse direction...

It is essential to do this VERY slowly...

WALKING EXERCISES

exercise Priorities for Efficient Walking

1. Direct the toes straight ahead. (With relaxed feet).

2. Relax shoulders completely. Your strength should come from a minimal muscle tone in the flexible lower belly.

3. Allow arms to hang freely and swing easily to counterbalance leg motion.

4. Walk with an imaginary bowl of water on your head (check neck is relaxed) - or imagine the pelvis as a bowl of water. Move it up in front to a level position. Walk so that the water does not splash out (check buttocks are released).

5. When good mechanics of movement are employed you can pick up an object from the ground without loss of pace or awkwardness. Use this as a check on your progress.

exercise Walking Meditation May be done in any small space ... best barefoot. Adapted from my memory of a weeks intensive Vipassana meditation with the Thai Buddhist master Chao Khun Dobhana Damatsabutsi. Each days practice should be at least half an hour, twice a day, if you are to progress in the way suggested below.

Day 1: Walk slowly across the room ... be aware of each step consisting of three parts. Lifting the foot off the ground, moving the foot forward through the air, putting it down.

Day 2: Walk slowly across the room, be aware of each step consisting of four parts. Lift the heel; lift the foot from the ground; swing the foot forward through the air; put the foot down.

Day 3: Walk slowly across the room, be aware of each step consisting of five distinct parts. Lift the heel; lift the foot up shifting weight onto the supporting foot; move the foot forward through the air (try to feel the resistance of the air); place the foot down to touch the ground; shift weight onto it.

Day 4: Walk slowly across the room, be aware of each step consisting of six separate parts. Lift the heel and begin the process of shifting weight onto the other foot; finish shifting the weight so you are centered steadily over your supporting leg, which should be relaxed and not held stiffly; lift the foot up; swing it forward; touch the ground; shift weight so weight is equally on both feet.

Day 5: Walk smoothly across the room. Notice that each step consists of seven separate and distinct parts. Lift heel; shift weight; pick up foot; swing foot forward; heel touches the ground; the rest of the foot rolls forward gradually making firm but gentle contact; shift weight (so weight is equally on both feet).

Day 6: Walk across the room. Each step has eight parts. Firstly send energy into the foot, which means that the relevant muscles are tensing in preparation of flexing the foot to begin shifting shift weight; pickup foot; swing foot forward; heel touches; rest of foot touches touches; weight shifts to centre. By this time but there should be no pause between 'parts'.

Day 7: By now you are moving at less than a snails pace across the room. Arms hang loose, breathing is easy, body is light. You are aware of every change in your body and your walk consists of one continuously changing unity of fluid coordinated movement.

exercise The Essentials of Walking

1. The transference of body weight via the spinal column to each leg alternately - all the while balancing on the very top of the thigh bones.

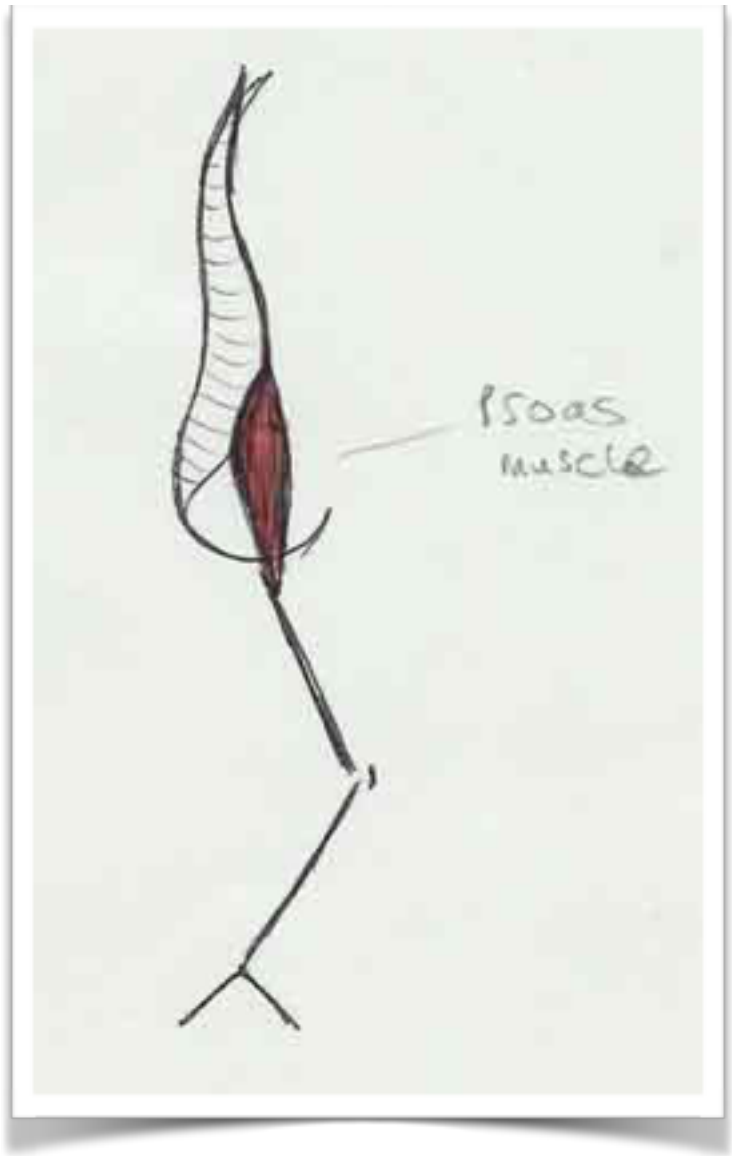
2. The use of the internal Psoas muscles to lift the thighs (see diagram). The lower end of the Psoas may be located with the fingers. Place left fingers in centre front of thigh crease and the right hand on the right side of the spine at waist level. Walk slowly and you can feel the action of the Psoas.

3. An easy see-saw action in the relaxed foot. Whilst moving forward in the air the foot is almost completely relaxed with just enough tone to adjust the foot the the right position. As the foot makes contact with the ground a muscle action comes into play.

exercise Use of the Psoas Muscles for Walking Strengthening the use of the Psoas muscle is best done in the critical rest position. Try various images to initiate the movement of the knee towards the chest without tensing in the stomach.

Some images work better for different people. Examples; Sliding the calf towards the chest or letting the knee fall into the chest. The other leg may tense to brace the frame but the abdominal muscles should remain flaccid.

It will help to have a well developed sense of the centre line. Especially an image of lengthening down the back. If you have got this clearly felt - go for a simultaneous narrowing up the front of the abdomen from pelvis to sternum and up the length of the sternum (This image relates to the use of a ligament called the Linea Alba which connects the pelvis to the sternum.



exercise Use of the Feet in Walking For short period everyday walk barefoot on your heels. Start by very slowly walking backwards being aware of how you use your heel bone. The walk backwards and forwards with you weight on your heels. Keep the feet as relaxed as possible so that the toes droop down.

exercise How Fast are you Walking? If you know your average walking speed you can work nut how far away a place is by seeing how long it takes for you to walk there. If the distance is known you can work out how long it would take for you to get there. In this way you can use walking as a measure of space and time.

Method - measure out 528 feet along a path. You can do this using the length of your stride or by counting paving slabs. Start walking when the second hand of your watch indicates 60 and walk at an even pace. Divide the time in seconds by 360 to get your speed in m.p.h.

Do it alone or you may be influenced by someone else's pace. Try the distance sauntering/walking quickly/jogging. This will give you knowledge of your range of walking speeds.

exercise **The Marathon** Walk a hundred miles. Think of nothing but the walk and its consequences.

What will be your route?

Where will you stop?

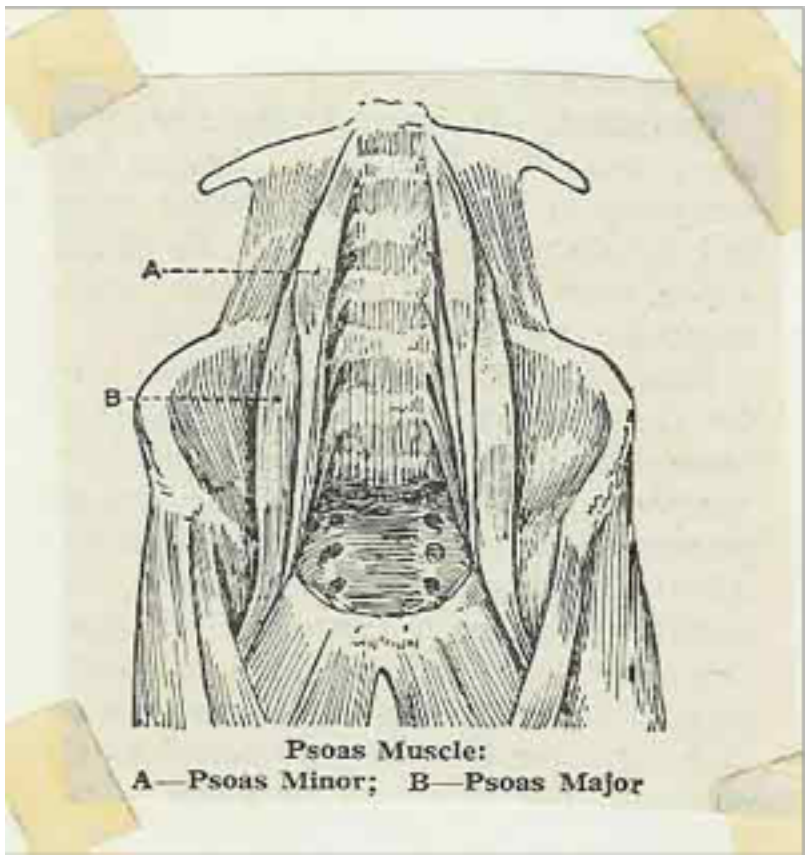
What boots will you choose to wear?

How long will it take?

Who would come with you?

How will you record your experience?

If you dedicate this trip to walking you will find that afterwards walking will never be quite the same.



Psoas Muscle:
A—Psoas Minor; B—Psoas Major

RUNNING EXERCISES

exercise Jogging A guide to starting your own running programme. Unfit? Check your condition by walking and down stairs for two minutes. If you feel sick or dizzy or have pains after this get a medical check up. If this is OK but you have not done any exercise in recent years start periods of fast walking for two weeks.

Step by Step. The next step in the third week is to introduce jogging into your walk. Jog between lamp posts so you are pushing yourself but not getting out of breath. Soon you will reach the stage of jogging to the first lamp post and walking to the next. Covering your distance half running half walking. Next stage is to gradually increase the amount of jogging. Jog between two lamp posts. Walk to the third. Jog between three lamp posts, walk to the fourth. Don't be over keen. Relax. You should be able to have a conversation whilst on the move.

Try and go out 3 or 4 times a week. As soon as you arrive home from work is a good time as you can follow the run with a shower or wash and a change of clothes. Those who work at home may prefer first thing in the morning.

Time & Space. Rather than trying to make it around a chosen circuit start off by going out for a set time. Start off with ten minutes or less and build up to fifteen and then twenty. If you use the same route each time, turning back at half time (6 minutes out and 6 minutes back) you can monitor your progress by the distance you get from home.

Once you are fit, jogging all the way and getting a bit faster you will probably settle for a convenient circuit. Round the block or part is usually a good notion because it means you can avoid crossing roads as much as possible which spoils the rhythm.

Health check. Jogging need not speed up and can be just a bit faster than walking. At first you can expect achy legs but your chest shouldn't hurt. Only when your legs are in condition should you start to increase your pace and start breathing more deeply.

Pulse rate is a good guide to how fast you should work. Subtract your age from 200. Then subtract a handicap of 40 for unfitness (unless you are fit from other physical activity). This gives you a beginners maximum pulse rate. In other words whilst or immediately after jogging your pulse rate should not exceed this figure. If it does you are pushing yourself too hard. (Take your pulse for 15 seconds and multiply by 4).

Jogging is not recommended if you are pregnant.

exercise More running tips

If the rhythm of breathing doesn't coincide with the rhythm of stride... allow it to be independent. Breathing should be allowed to respond naturally to need. Breath in easily through nose and when necessary mouth.... face relaxed.

It is important to find and feel good about your own pace. A good pace to take is one at which you feel that, if you were just that bit faster, you would be able to run for ever.

Don't worry whilst jogging. Keep your mind either on postural images or notice things that you are passing. If you still don't feel quite with it, try appreciating your speed in relation to stationary objects and think, "I'm Here! I'm here!" Be right there in the physicality of the activity.

It is best to go out before eating or drinking. Eating and/or drinking up to 2- 3 hours beforehand can cause stitch and other discomfort.

Wear warm clothes. Veer on the side of having too much on; its better to sweat than be cool. Sweating encourages a general dilation of the pores and organs that is an important benefit of jogging.

exercise Running Without Pain

Whilst running think of the following directions:

All the leg joints from hip through knee to ankle are imagined as if air could pass, between the lightly articulating surfaces.

You feet meet the ground firmly but without tension. At first as you relax your feet you may feel you are running flat footed.

The legs do not push (the back leg should not be straightened) The trailing leg is relaxed and empty.

There is a void above the top of the head, the skin of hte face drops down whilst the skin at the back of the head glides upwards. The back of the neck and spine e l o n g a t e.

Exhale from the belly.

No effort should be made. Running is perpetual falling with the legs gently catching you from falling down. The whole body is at ease.

The torso swings easily to counterbalance the alternating support of each leg.

(notes from a class by Miranda Tufnell and Eva Karzag in late 1970s)

> "Only because there is no strength in the belly does one get our of breath when running" Okada Torajiro

exercise Running like a fish (once you are basically fit)

Run 10 minutes on day one; run 20 minutes on day two; 30 minutes on day three.

It may be noticed that on the third day after 20 - 25 minutes of running you get a 'second' wind. But it is often more than an extra burst of energy. Exhilaration may sweep through your body. Your legs become light and bouncy. Where there was breathlessness minutes before, now you feel like going faster even faster, even leaping. Arms and head become weightless.

It seems that this 'second wind' is a very healing and creative space to enter and the euphoria may be followed by a deep relaxation.

A direction or encouragement that may help you to break through this barrier is to think: "I can run like a fish swims".

So , running is natural to us. Effort with accompanying tension can get in the way of something our body is evolved to do very efficiently. Perhaps it is something we do better by unlearning than by learning.

The direction 'Like a fish swims.' also suggests being aware of the medium of air through which we move and by use of the oxygen of which we burn our fuel.

So perhaps you may find it obstructive to have a complex set of body images as previously suggested. It might be more useful for you to simply think: "Give Up..... Run with abandon".

From notes of a Contact Improvisation course in Cardiff given by Mary Fulkerson in the late 1970s.

> "The first five miles is a sorting out process. You think what you are going to be doing the next day. You say maybe I've got to call at the grocery stall after my workout'. The second five miles is sorting out your body. The third stage there are creative ideas. When was a journalist I used to go out and run until I got a lead for my story. Running is great for journalists. By the time you've clocked up 20 miles you're into free floating creativity, you think about ideas and things.
>
> As for the last few miles.... You are into free floating floating fantasy. That is when people talk about a runners high; you're almost stoned on running. You hear a car honking, but it's like you're wearing a space helmet. You feel you could run for ever with the cares of the world away from you, you become a part of the universe." Kathrine V. Switzer. Quoted in Guardian 1:8:80 p8.

HOW TO RUN
(WITHOUT PAIN.)

EX. 2.

IMAGINE VOID

glide up.

drop down.

⊗ These joints are all very relaxed. It feels as if air could pass through between the lightly articulating surfaces.

EXHALE

The torso swings easy to counterbalance the alternating support of the legs.

no push in the legs (do not straighten the back leg).

BODY FALLS THRO SPACE

The feet meet the ground without tension and completely firm. when you first relax your feet you will probably feel you are running flat footed.

'No 'Effort' is made. Running is perpetual falling. The whole body is 'at ease.' The neck and torso are felt to be continually elongating.

this trailing leg feels relaxed and empty.

"Only because there is no strength in the belly does one get out of breath when running."
Okada Torajiro.

These are notes taken after a 'release' class by Miranda Tufnel and Eva Karzag. Before this mainly I couldn't run long distances without stitch, panting, faintness, sickness, + aching teeth. They changed my focus from my legs to a more relaxed and total body balance. Afterwards using these directions I found I could run comfortably around Clapham Common — about three miles, without any adverse effects.

JUMPING EXERCISES

exercise Jumping 1 Jump to reach up as high as possible. Do a warm up first with some jogging, knee bends or whatever. Mark a wall at the zenith of your leap. Chalk is a good marker.

Fold in the thigh, bend knees... then spring into the air. Each day mark your progress along the wall. Five a minutes a day until you reach a plateau.

Version: Standing start double foot take-off long jump.

exercise Jumping 2 Make little jumps that gradually increase in height. Do each little jump on an exhalation, making a noise that increases in volume as the jumps increase in height.

Breath in... knees bend

Breath out... jump and shout.

Note; use feet and toes and arms as well as legs to take off.

exercise Jumping 3 Take a long run up as if you are about to leap over a stream. At a predetermined take-off point leap for all you're worth. Really enjoy the sensation of sailing through the air; and try to remember what it was like as soon as you have landed.

Ideally you should arrange to land in a sand pit. If this isn't possible long grass and soft ground makes a good alternative, but of course you need to take care.

It helps to sort of fix the sensation if you get someone to take a Polaroid picture of you in mid-air.

exercise Jumping 4 Preparation

The classic dance plie is an excellent training to build up strength for jumping. It is also a good warm up and preparation for the crouch and spring action which is the basis of powerful jumping. Always fold in the hip rather than bend the spine.

Try a session of imaging a centre line with Psoas action and then take this into a series of plies and then on to some jumps.

Use the momentum gained by swinging arms to jump as high as possible. Hold a piece of chalk and score an arc at the zenith of your leap.

After a good warm up do 6 to 12 leaps each day. Marking your progress up a well until you reach your ceiling.

exercise Step, Hop, Skip and Jump There are eleven simple ways of making a step, hop or jump. These form the basis of all other pedestrian action. The eleven fundamentals are;

A step with right foot forward

A step with left foot forward

A hop from right foot landing on left, right or both feet

A hop from left foot landing on left, right or both feet

A jump from both feet landing on left, right or both feet

Each of these eleven fundamental moves can also be done backwards, or sideways to left or right. This gives us a total of 44 basic units of perambulation not many of which are in routine use but all of which are the raw material of dance.

Tryout all these fundamentals in various combinations. Note the combinations that appeal to you. The next quality we can add to the fundamentals is a change of direction or turn. Try adding various turns into the combinations you have chosen.

When you have something that feels good try it out to your favorite record or other suitable accompaniment.

HANDLING EXERCISES

exercise Hand Contact Improvisation Exercise one hand against the other. Flexing, pressing and rolling the hands together: find every possible combination of mutual contact and motion. Take all the routes that one hand can find rolling around the other. Vary pressure from very soft to very firm.

Focus your attention on the sensations coming from each hand and allow this information to gradually build a mental map of your hands in action.

> Note sensations arising from the surface of the skin and from hairs.
>
> Note sensations from the muscle and flesh of the hand.
>
> Note sensations from the bones.

Gently find the limits of the flexure of each joint. Allow the wrist to relax.

Spend five minutes per day on this exercise. Continue for ten days with one days rest.

exercise Arm and Hand Throw many different assorted objects into a bucket on the other side of the room. Choose a distance at which you are likely to achieve about 50 per cent success.

10 mins per day. Rest every 5th or 6th day.

Continue until a screwed up sheet of paper will stand a 90 per cent chance of finding the inside of the bin when thrown over your shoulder.

Alternatively a darts board will fit into almost any room. Chart your progress with ten minutes a day throwing at 20 practice. When this is 95 percent go on to a double or bulls eye.

exercise Hand Reconnection Program

Day 1. examine your hands intently and lovingly for a full fifteen minutes; nails, fingers, thumb, palm and back of the hand. Then for five minutes lay the hands out flat and imagine the hands lengthening. This image will allow the hands to relax to a greater degree than it is possible to will consciously.

Day 2 - 5. Use each hand to draw a map of the other hand as best you can. Mark the creases, scars, veins, joints and other marks carefully. Do one side per day.

Day 6. Consider your right hand, relaxed and palm up. Move the fingers and thumbs slowly and resolutely, although still relaxed, towards the palm with full attention. Touch the palm amd open the fingers again. Repeat six times.

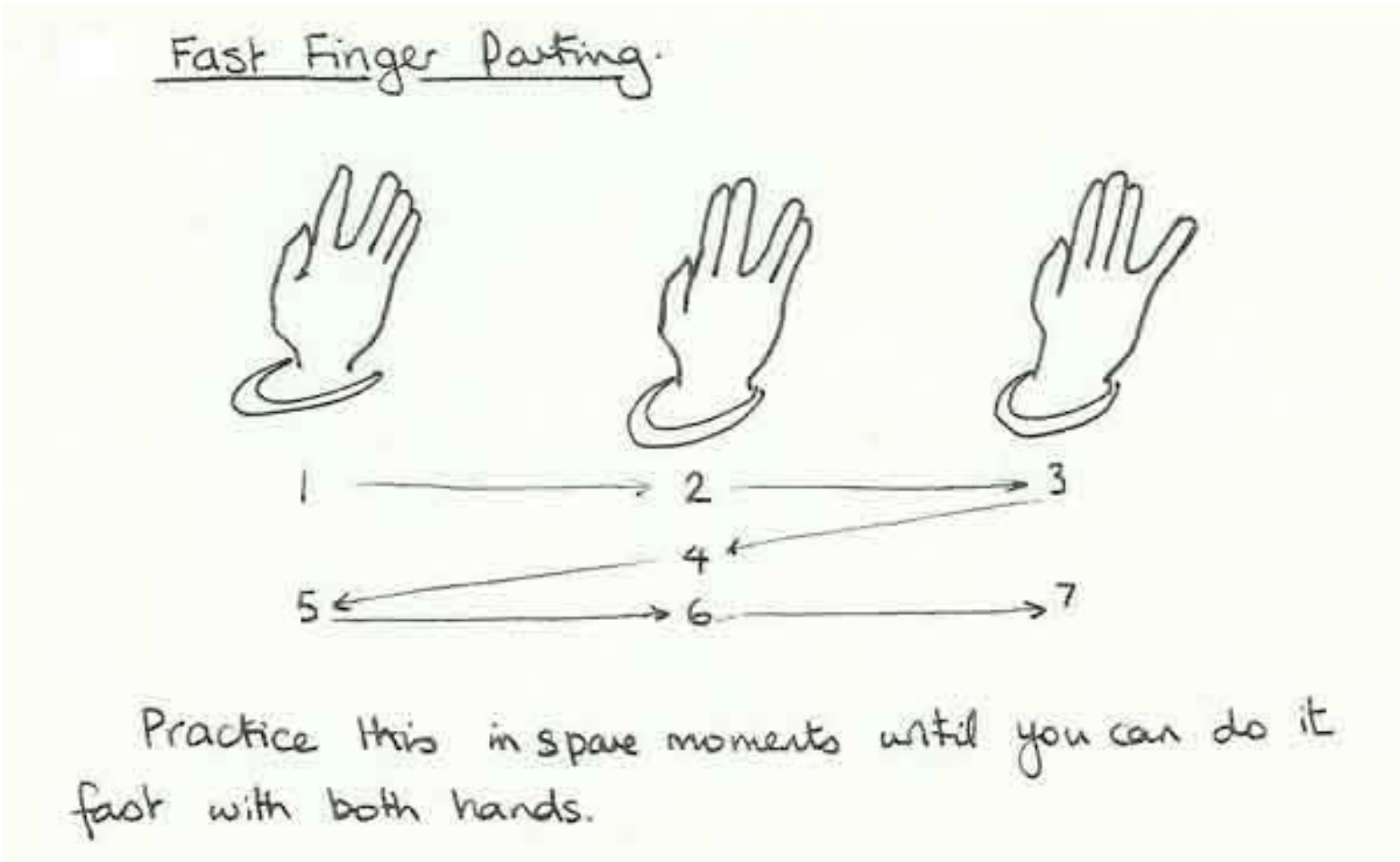
> Repeat the above but more tensely. End up making a fist. Do this six times.
>
> With hand extended slowly splay fingers and thumb. Then return together. Do this six times.
>
> Repeat the above three exercises for the left hand.

Day 7. Rest.

Day 8 - 13. Repeat exercises as for day six.

You are connecting the hand with your conscious attention in these exercises as you first did when you were about 8 - 12 weeks old. You are imbuing the hand with importance and opening channels for its powerful operation. The most important quality to apply to these exercises is concentration.

exercise Fast Finger Parting



exercise One-handed Task Prepare a simple meal with you right hand tied behind your back. Repeat with other hand tied.

In addition to giving insight into how we use our this is an ingenuity exercise. Note: Barbara Clark claimed that use of the non dominant side of the body in everyday tasks such as drinking tea, brushing teeth and combing hair will improve body alignment.

exercise Drawing Freehand Circles Make the circle big enough to fill a sheet of paper or page of an exercise book. The with a pair of compasses enscribe a circle of similar radius. This is used to check the accuracy of your hand drawn circle. Do the hand drawn and mechanically drawn circle in different colours.

> Continue the process of hand drawing circles within the circumference of the first large circle, gradually decreasing radii to make a series of concentric circles.
>
> Continue this practice everyday until you become accurate.
>
> Compare your first effort with one after ten days practice.

Note; You may find it best to poise and then draw the circle quickly, with a flourish...

exercise Hand Draw Lines Rule a lot of straight black lines randomly arranged on a large sheet of paper. Then with a red pen draw freehand lines parallel to the black lines. Experiment with drawing speed and distance apart.

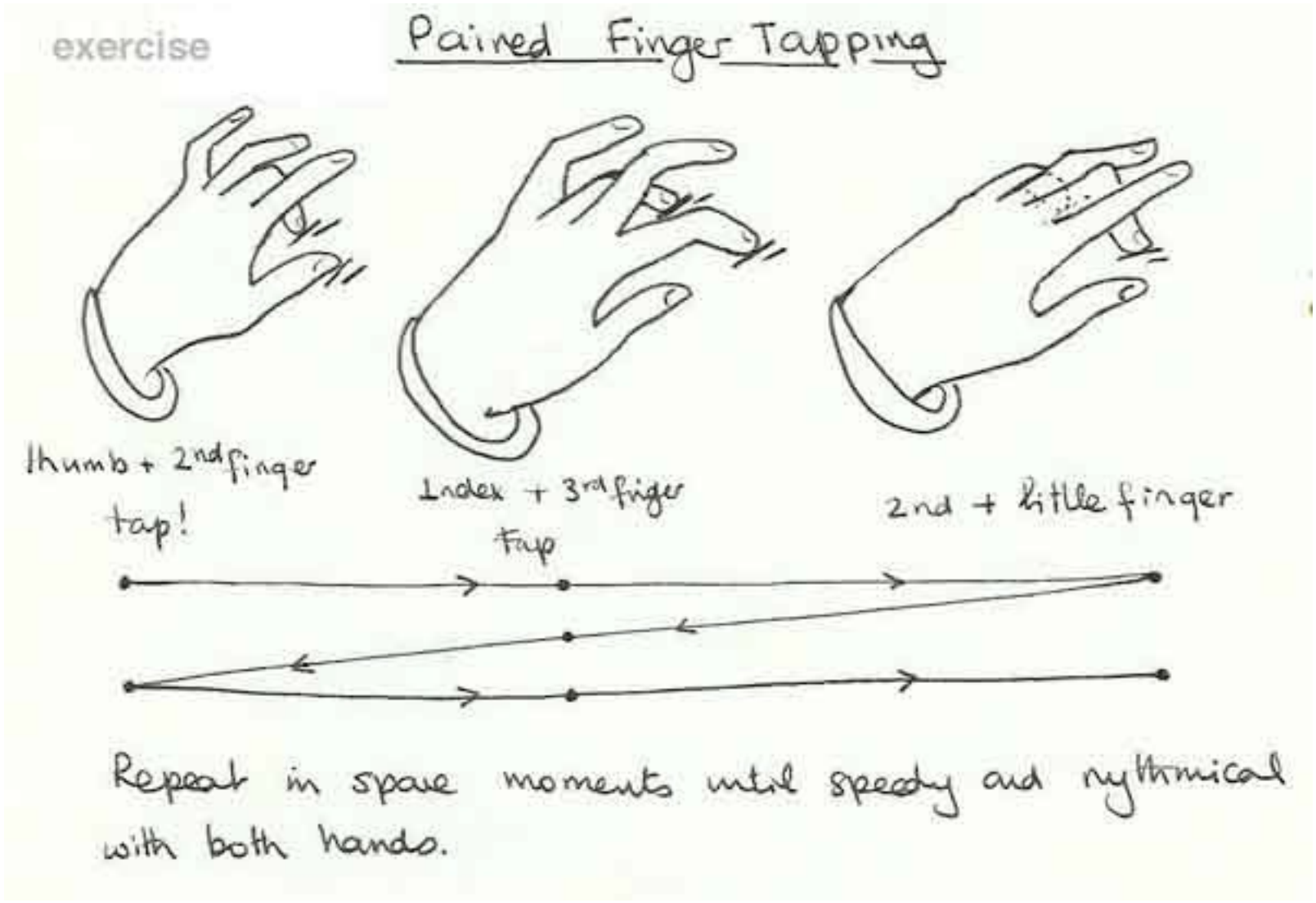
Repeat once each day and pin up the drawings in a row on the wall.

exercise Hand Tracing Take a piece of tracing paper and, with a pencil, trace a small object from a magazine. Then turning to another part of the magazine continue the drawing by tracing another object or shape. Keep selecting parts of images and adding them to your composite tracing working fast without thinking of any final result. Adjustments may be made to the picture with rubber and pencil.

The first few attempts will probably be aesthetically disappointing, but amazing things will appear if you stick with it.

Pleasing results can of course be tidied up and inked in.

exercise Paired Finger Tapping



VOCALISING EXERCISES

exercise Vocalising - Lung Control Place the fingertips just below the ribs so that attention may be directed towards control of the diaphragm. Do the two exercises below daily with a break of a couple of minutes between first and second.

Part A. The idea is to gain control of an out-breath so it comes out evenly and powerfully over a measured amount of rather than all in a sudden rush then feebly.

> To gain control of the breathe it is useful to be able to be heard, seen, or felt.
>
> A whispered HAAAA allows the exhalation to be heard.
>
> Breathing onto a cold window pane allows the breath to be seen.
>
> Breathing into ones cupped hand, as when smelling ones own breath allows it to be felt.

Using any of the above techniques. Keep strength in the out-breath for a count of 10. Strength means gaining control so that a steady volume of air leaves the lungs. Repeat cycle for five minutes. (Front and back of the torso may be imagined as two flat boards that move together to expel the air as in a bellows)

Part B. Repeat above using a steady HISSSS instead of HAAAAH. Check lips, jaw, and throat; Are they all as relaxed as possible? Keep this more restricted exhalation coming out steadily for a mental count of 15. Continue cycle for five minutes.

See also breathing exercises above

exercise Vocalising - Throat Relaxation It is physiologically necessary to relax the throat in the process of yawning.

> Sit in front of the mirror.
>
> Make a yawn. A true yawn can often be induced by relaxing and making a couple of deep breaths; but if doesn't come imitate one. Notice how the mouth and throat are wide open. Whilst still yawning, close the eyes and take note of the feel of the concave tongue and arched palate that occur whilst yawning.
>
> Relax, finish the yawn. Then, with eyes still closed, reproduce the same curved tongue and arched palate with muscle action only.
>
> Open eyes and check in mirror.

Run though this exercise for a set period each day until the reproduction of the yawning pattern is assured.

exercise Vocalising -Tongue Articulation The tongue is a most complex muscular organ with more muscles in its small space than any other part of the body.

Whistling is one of the best methods of developing tongue control. If you have a regular walk outside everyday resolve to whistle a complete tune each time you go out. If you don't have such a regular open air promenade make sure you include whistling in your weekly singing session.

T, D, J, L, N, are letters which primarily use the tip of the tongue. Try some fast permutations of the following tongue-tip block then devise one of your own.

> T - D - J - L - N
>
> D - J - L - N - T
>
> J - L - N - T - D
>
> L - N - T - D - J

N - T - D - J - L

The hard C, K and Q are letters using the back of the tongue. Try some fast repetitions of the phrase below and then make up one of your own.

Kitty the jocular Cock-a-too.

exercise Vocalising - Roof Arch The behavior of the roof arch is controlled by a pair of muscles in the soft palate called the' Pillars of Fauces'.,To gain control of these muscles;

Making the round 'ING' brings the palate and tongue together. 'AH' shoots them apart. Repeating the two sounds 'ING_AH!' vigorously exercises the soft palate.

These may be repeated furiously for a minute or two in the manner of a mantra; or you can construct a sort of sound poem using these sounds. e.g.

TING AH... LING AH...

TING AH... LING AH...

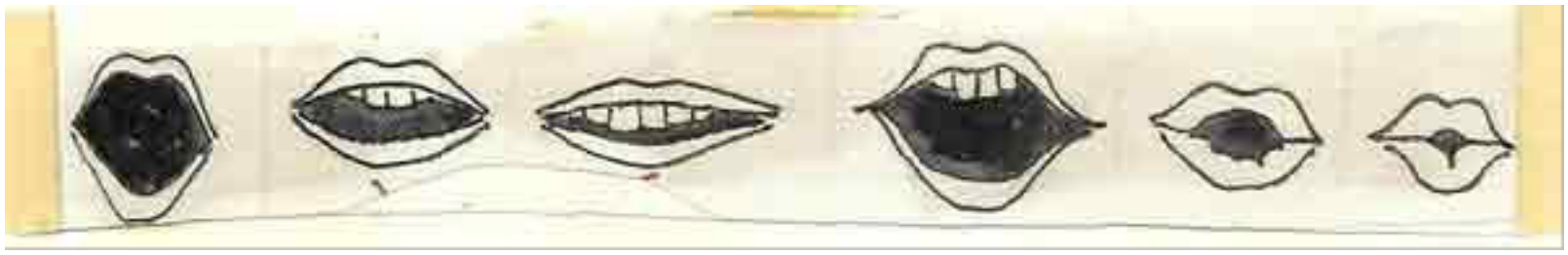
TING YAH…FING AH...

FING AH... FING AH…

TING YAH... FING AH...

TING AH... LING AH…

exercise Vocalising - Lips Gape, pout and grin



Go on do it!

Ah... 000... Eee...

Yoo.. Ah. . . Yoo... See...

You are, You see.

Make a fierce muscular pout. Then draw back the lips tensely to bare the teeth; from there open the mouth as fully as possible, poking the tongue out and curving it down to touch the chin. From this full gape gather the lips slowly and stiffly inward, and only when they are firmly pursed, push them out into the original pout.

When all else is said and done and practised it is the expression of the mouth that will do most to make our speech vivid and give us an alive face that will attract the attention we need to be brilliant.

exercise Vocalising AHHH..! AHHH... This sound is the fundamental of speech and is an important vowel in our language.

Open the mouth as if to yawn, simultaneously inhaling. Let a relaxed, resonant loud 'ARHHH' sound glide out. Repeat several times, letting each one become longer, louder and deeper than the one before. Do this by increased relaxation.

Once you've got the hang of a really uninhibited AHHH ! try releasing the other five vowels with the same lack of re-straint. (U = 00)

A...

E...

I...

0.. .

U.. .

Now to progressively group the vowel sounds in twos, then in threes, and finally altogether.

AH... A... E... I... 0... U...

AH___A... E___I... 0___U...

AH___A___E... I___O___U...

AH___A___E___I___O___U...

Then try the following permutations;

U - 0 - I - E - A - AH

I - U - O - AH - E - A

0 - I - U - A - AH - E

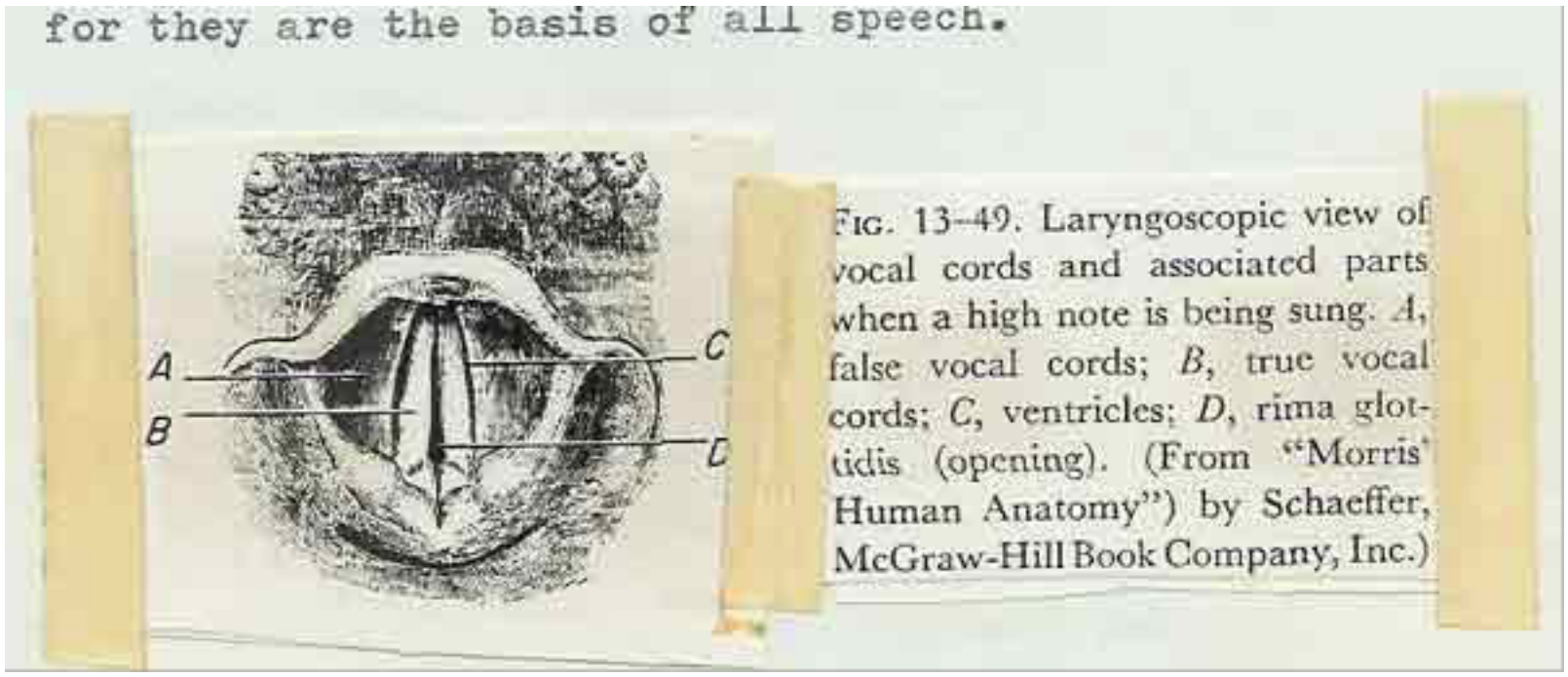
E - AH - A - U - I - 0

A - E - AH - O - U - I

AH - A - E - I - O - U

Give each vowel equal presentation.

Note: It is easy to skip this exercise as too obvious but take care with these simple sounds and utter them well... for they are the basis of all speech.



exercise Vocalising Resonance

A. Mouth Resonance: Repeat the vowel exercises humming between each vowel intonation... mmmAH... mmmA... mmmE... mmmI... mmm6... mmmU...

B. Nasal Resonance: Repeat the vowel exercises humming with an 'nnn' between each vowel... nnnAH... nnnA... nnnE... nnnI... nnnO... nnnU...

C. Chest Resonance: The hard 'G' suppresses the sound, forcing the resonance down into the chest cavity...

Garh...! Gay...J Gee...J Gi...I Go...! Goo...!

Gar Gay Gee...! Gi Go Goo...!

Gar Gay Gee...! Gi Go Goo...!

In the above exercises it is important to exaggerate the resonance and really explore the possibilities of your 'instrument'. Having explored each area of resonance, practice going from one to another.

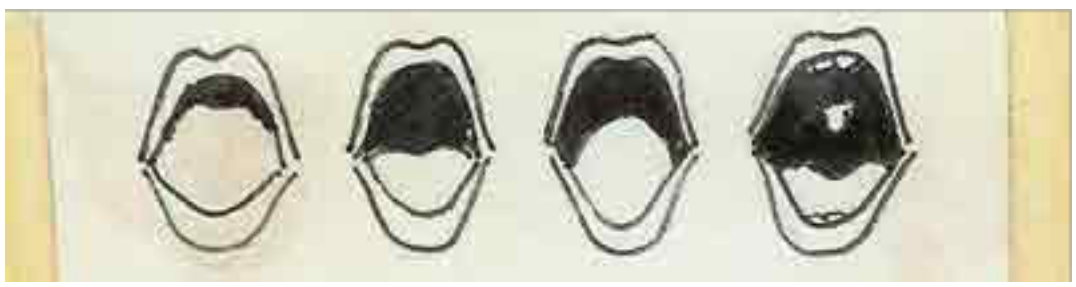
Make up a poem which takes as its main aural effect a play between these three areas of resonance.

Note: Higher humms will resonate in the skull.

exercise Vocalising - Neck Tension The vocal sounds are produced in the neck region and any tension here will make the voice stilted or limited.

> To relax chronic tension around the neck area.
>
> Let the head hang forward. Feel its weight. Shoulders are fully relaxed completely releasing the head.
>
> Using the minimum effort necessary slowly roll it around to the side (count of ten) leave it slumped over sideways for a count of ten before rolling it back (count of ten). Hold for ten. Roll to other side for count of ten. Hold ten. Roll to front for count of ten.

Note: We might simplify this by saying do VERY SLOW neck rolls.



exercise Not Vocalising or Not Speaking Much seemingly worthless talk often has the useful function of 'getting things off your chest'. However there is still much dull unnecessary prattle.

Although the voice may be the most vivid form of communication it can also be a gate to close off more meaningful non-verbal experience. Let silence speak louder than words.

Be with another person and for a whole morning, afternoon or evening and make a pact not to speak. Don't ignore each other or constantly exchange notes but get on without words.

Later repeat the exercise but this time agreeing to allow only essential communication, things worth saying because they are beautiful in themselves (poetic, melodic etc) or because they bring attention to something worth sharing.

Cut out the dross leaving only worthwhile communication.

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